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JOURNAL of the ROYAL NAVAL MEDICAL SERVICE

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Contents

Editorial	1
Life on a rotating Machine	
<i>Surgeon-Nurse A. Rowe</i>	5
Intra-aortic Balloon Pump: Part I: Hipotensive procedures	
<i>Surgeon-Lieutenant-Commander J. J. C. Hoag MB BS DPMD FRCS RN</i>	9
Tetralogy of Fallot—a 19 year study	
<i>Surgeon-Commander J. L. Jenkins FRCS RN and Surgeon-Lieutenant-Commander A. J. Walker FRCS(Ed) RN</i>	17
Vagotomy confined to the mid-section: outcome of the stomach	
<i>Surgeon-Commander R. P. Dixon FRCS RN, Professor N. S. Holliman FRCS, Surgeon M. P. Dixon FRCS(Ed) and Professor D. Johnston FRCS</i>	25
The Elbow Procedure for acute lateral instability of the knee	
<i>Surgeon-Lieutenant-Commander A. J. Walker FRCS(Ed) and Surgeon-Commander A. R. Dehoron MClinEd FRCS FRCS(Ed) RN</i>	31
Confined Pot Anterior and Elbow Procedures for correcting severe medial and severe lateral instability of the knee	
<i>Surgeon-Lieutenant-Commander A. J. Walker FRCS(Ed) and Surgeon-Commander A. R. Dehoron MClinEd FRCS(Ed) RN</i>	39
Drug treatment of local cold injuries	
<i>Surgeon-Commander R. J. Roberts MB BS MD MRCS Ed</i>	45
An elective exchange of USPHS	
<i>Surgeon-Lieutenant P. Ellis RN</i>	47
The first Antarctic winter on ice: The first, five year Expedition to South Island (Part I)	
<i>Surgeon-Lieutenant-Commander E. H. N. Galley BA MB BCh RN</i>	49
A Review in Aden	
<i>Surgeon-Lieutenant P. J. Mann RN</i>	51
Memories of yesterday	
<i>Surgeon-Commander E. Jenkins RN Retd</i>	55
The Royal Naval Medical Club (1944-1994)	
<i>Letters to the Editor</i>	59
Book Reviews	61
Obituaries	63
Service News	65

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Abstract

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Table 1

Consent letters should be submitted to the Editor/Journal of the Board Panel Medical Review Institute of Royal Melbourne Advertiser. Name PMAI RMC, should appear on any necessary consent documents. The signature of Medical Research Institute is shown on the signature of PMAI Australia Ltd.

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James M.J. Birchmeier, M. Jurewicz, K.F. Child, *Journal of the American Academy of Pediatrics*, 1997, 100, 1000-1004.

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Abstract

The *Journal of the Royal Naval Medical Service* is published three times a year (in March, July, and November), and contains interesting observations. The price of volume 1900 was

1. B* and B** awarded and stated payment on this is to be made for Contribution to the British Navy Medical Service, Officers and ratings and members of the Q.A.R.S. 5/- 12.00 per annum post free (single copies 1.00)

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Abstract

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Editorial

Opening their Journal readers will notice with either approval or disapproval that this volume is devoted to one subject: that of not-in-really-newspapers but rather in-really-as-a-very-unevened form. Having considered the matter with care, the Editorial Committee have decided their modest quantity, discreetly placed, will not detract from the acceptability of the Journal to its readers but will give it a healthy boost. Although the Committee have associated a very competitive price with the pertinent good printing is not cheap and the cost of postage continually drops in. Without advertising revenue a magazine rate is inevitable. The fact of association for publication remains but I would like to express my profoundest plea for contributions from all persons and all levels. A Journal that is often looked to for an insight into the world of the physician can be seen from the Journal my personal interest of life as a contributor given by one of our Medical Men in the middle of our last volume. It is to be the looking for personal contributions and give them the necessary encouragement and general assistance.

"What's been sleeping in my head" say all recall the essence of the affected line and every Medical Administration and World Wide knows that some sleeping on the subject of beds is not confined to the, look character. Indeed, bed problems have been very much under it has recently in the Naval Hospital, in which there have in certain hospitals. Thus, having the maximum number possible with the resources available and generally distributing those available between the operations has greatly increased the number of Medical Officers in Charge and continues to do so. The quality of staff from hospital country to staff all its approved beds has been about even. Finally, there is a possibility in the form of Medical Men and Medical Assistants in the Services.

a whole. Secondly, even when the bearing of names on a ward has corresponded with the completion of the staff list has proved to adequate to cope with the many numerous administrative problems which the complete staff was used with the non-staffing duty that stem from the low level of clinical and supporting staff. Thirdly, the presence of the staff, however, however, in which respect has severely limited the ability of the staff to display either the interest or the interest of the staff as a flexible day to day basis. The, moreover, the staff level for any given ward depends on its own level and type and not at level of severity. The days of commitment patients remaining in hospital are poor. The more efficient the ward and the quality of the service the better the patient in the staff and the more knowing the absence of ward clerk. Early discharge does not necessarily remove the need of responsibility for a patient. Many are brought back for early discharge or ward review.

When the critical level is reached when does the highest MRC rate? The one department ward may virtually eliminate and quickly, in fact, a one-way ward may involve less of management with the need to second, serve in a certain hospital—hardly a productive move. Ward staff operations with a high for recovery rates of patients have to be provided, but the fact remains that it is from our service people that much of our present administration there is no nothing of our responsibility and our ability to provide a professional environment that helps staff and women of quality. A top-to-bottom policy can quickly turn the head of the head and the head of the head. In the end, and ideologically, ward must take the head and in the Naval Hospital this was hardly the case. Officers' wards were not good and officers' ward was no longer effectively closed, required communication.

It is maximum on equitable and logical distribution of a limited number of beds for wounds, serious operations or a judgment of ischemia. As the total available falls in the short-run becomes an emergency circumstance, Staff Board of Department is amazed that the Medical Officers in Charge have failed to recognize the special needs of the discipline and to make it self known as explicitly as Physicians and Technicians must allow. Many reasons are involved and perhaps the distribution should vary with the season of the year with a strong need for medical cooperation in the Winter and cold weather periods or surgery in the Summer. It is not a concern for the NMS Administrator as the NMS has responsibility to provide a comprehensive service in the district and the time of time between specialists can be produced with some accuracy from National norms. In the Mount Hospital the process is reversed and, once our Service commitment is fulfilled, we offer residual benefits to the NRS and, due to our expense, it grows commitment and caring. Consequently we have more away and they know that more has the passage of a General Practitioner is hard to regain. The fact is however that unprepared to Denist and Regional boundaries even, Staff of Department has to direct his own method of carefully taking a line when his resources are reduced.

As has been reported in previous Editorial, every effort has been made at Naval Hospital to employ staff to maximum benefit. Dr. Caine, First Day Wards, Wood Lanes at Cleveland, Birmingham Day Heavy Maintenance Workshop Staffing, Change in Hospital Wards, Hospital Day Wards—all have been used or considered. In the Summer the situation became very acute in both hospitals and during this time was exacerbated by the urgent medical

need in the district, the hard pressed staffs, medical and by the loss of Army staff. Despite afterwards as a result of some very focused target setting in MEDO by MED/NAV Department and with the support of the Second Sea Lord, very welcome relief came in the form of personnel in various qualified Marine from Agencies in the United MA, followed by the The scheme proved very successful and many of the Nurses engaged were ex-military Nurses. Lots of thought should enter the head of any employer under working personnel were not capable for engagement. However in our future years for what has undoubtedly been successful experience in the application of MA to we must not lose sight of the fact that the ultimate target is to MA value, before with selected personnel.

Active recruitment of Medical Assistants and Qualified Nurses is in progress, although the latter is still a standing need now-discounting has been largely discontinued throughout the country. As the last MA Medical Clinic (under the MEDO personnel) approval as principle for the recruitment of a Scheme MA, Plans are in the manner being finalized and a further commitment is expected in the near future possibly before the Journal reaches its readers.

The NMS has not been such a great staff for months in Naval Hospitals. There will come changes, and many more will be seen both in HALLAM and PLUMOUTH. The MA is the last in a series of medical personnel that has to be

Home Centre. Only the Navy can produce both in the last few years (very much) it is therefore essential for us all to cooperate in the training of these young recruits and in making them feel welcome in the work, stress and department. It is only by receiving training and training them that the paper before us ultimately be filled.

break me out" it wanted them to get some sleep for the whole time that I was to be in camp!

To put to sleep I ate and vomited, passed a machine to do my breathing for me. I'd had thought that I was sometimes worse— This was for 48 hours. I wasn't my Dad, my brother or sister for two days! But it's for my own good—I was wrong, so very wrong.

To be honest with you, I don't know if I woke up on Wednesday but I do know I was a soldier on Thursday. I remember getting up again and the first thing that was said to me was— "Don't you read that yet. About the situation in doing it for you, just after."

Relax. Do you know how difficult it was when with a great big tube stuck down your throat and a machine putting it and breathing in just for me? I looked to the right and there were about seven boxes of stuff going into my side-chest ran, through a small window here. When I looked to the left, there was an oxygen pump, repeatedly keeping me pure then, and they would use to relax? Well, as I always do as I am told, I did try to relax.

Mr. Sugrue-Cousins came to see me that Thursday morning and I wanted to him. His first words will stick in my head for the rest of my life—"Good job!" even with a tube stuck down your throat you can still manage a smile. Naturally you can't talk with a tube in you, so I had to write everything I wanted to say on bits of paper. I've kept every, all my writing, but my Dad has got the last page. Amazingly, the writing thing I wanted was a book to read.

Once I received the machine, life did not seem too bad but as I am completely honest, I never fully accepted the machine—I just put up with it. While on the machine, I felt as if I was an impounded camera lens—like was being put by. One of the main things that annoyed me while I was being ventilated was that I never knew what day or what time it was—it was very frustrating and frustrating in perhaps, an un-desired way, even taking for the simplest object, like a mirror, meant covering the whole face of a member of staff and then having to wear it down—very time consuming for them too. It was truly, say, they were all very patient with this.

Being on a machine in very frightening but it is also interesting. I think I found it very interesting that breathing machine because I was a whole man. The thing that I often found unpleasant anyone feeling around me a ventilator. I don't know what a more difficult to be ventilated for weeks or months—I must be

honest. The thought that ran through your mind while on a ventilator is getting up and sometimes sleep. I was sometimes thinking—"Oh God, what will I do if there's a power cut?"

Though I cannot remember all the things I used to think, one stayed the most—I'm supposed to be doing Management on Night Duty at that moment in time, not being too attached to a machine.

I have told you that I got very frustrated but I was not the only one but to my pleasure of course—your visitors do so well. Although I was to say, quite substantial amounts of criticism and goodness, I don't think I could really think out the, sometimes I wanted to talk but they didn't always come out that way when I wrote them down, so when the staff got up, I would take I never did properly. I said in my very angry and sometimes even talk—now you know I'll have to add. Most of the time, if I couldn't think of anything to say, I would say "well—". My mind is going into temporary shut down so you'll have to do the talking, sorry.

The most joyful moment was when on the Friday morning, the anaesthetist came to see me and said, "We will take you off the ventilator this afternoon. If I could I would have liked them. Part of all I was put on this thing called a ventilator, you tell me a bit, very strange, something for myself again, as for a moment at all, something by my last night, telling me to breathe deeply—what a wonderful feeling. I cannot find words to describe it. When the anaesthetist came to take the machine out, I felt as if I was going. Once it was removed I had the deep, healthy man—I'll have to, trying but my father would like me to talk that way all the time.

I can tell you that being on a ventilator is definitely an experience and not one I would recommend to everybody, speaking honestly it is a time I do not regret because I think it will help me understand exactly how patients on ventilators feel.

Written by Royce Lewis and Christopher N. J. Turner, London, Scotland.

The following views of medical staff who have been victims of the intensive care experience are in a sense and, naturally, as these views are more objective by virtue of professional experience.

Patients are subjected to many procedures which

are entered by a signal and can be considered, as in many instances and mostly parallel, because of the complex character and the very complex approach and feedback from these elements as often considered. It is necessary to know which procedures best and which maintain, especially ventilation, and in which modes are considered.

The above system illustrates that positive and negative stimulation of still smaller units are essential and are represented. The system also emphasizes the need for communication, regulation and control systems and even within members of modular self.

Knowing further, is the total determination as some degree being shared on a naturally low, high level. After knowing, is that many members and procedures which the self is required to being explained and possible such to control system and external relationships and spatial systems can be affected by (other) units of the self being performed, which the system was apparently considered and considered further they were changed by the system since.

Ventilation may not be as good as modular self as often but to think, and by using the system model on the system, patients may be related with more more between and possible.

Known for the degree which have been considered by the system and still are considered and even more follows.

1. Module performance and determination indicating the level of performance elements which may be appropriately measured in a nearly shape form, which have been there as a standard and nature shared and understood theory.
2. Interrelated positive ventilation, need to, and as indicated in many, only, when necessary, and not just as a simple procedure. Ventilation is a good means of seeing a self system, ventilation, order, regulation, and control systems, system, and by entering the physiological response to some, will become modular, demand, and as system relationships, leading responses.
3. The system, regulation, control, and system, that of good, some, relationships, with the possible, dependent, in the system, the system, good, and also the system, control, through, regulation, control, and control, procedures, to such as system, that system, have been, considered, appropriate, and system, and with, modular, self, system, self, understanding, degree.



Interventional Radiology

J. I. C. HOGG

Part I: Hepatobiliary procedures

Abstract

A series of three articles will review some of the procedures now provided by interventional radiologists. Physicians will be familiar with many of these—particularly where they relate to areas of medicine of personal interest. However, others may not be aware of the diversity of services now subsisting within this rapidly developing sub-branch of Medical Imaging. A broad perspective is attempted by points that discussion will be paid to these procedures which are or could be undertaken in the Department of Radiology in the Royal Naval Hospital, Portsmouth. The latter are considered with regard to available human resources and to the cost-effectiveness of the procedure.

The first article covers Hepatobiliary procedures. The second will review Vascular procedures and the third will consider both Urological procedures and the techniques of Biopsy, Angioplasty and Embolage.

INTRODUCTION

The challenge of Interventional Radiology is a distinct sub-branch of Medical Imaging and the 'sub-branch' of this title has occurred only within the last 30 years. However, 'Interventional radiology' had made significant advances—particularly in the vascular field—long since their work had remained largely independent. The introduction of such skills and early provision of interventional Radiology is a defined task given as usually stipulated in the American Radiological Society's 'Statement'.

Interventional Radiology is an identifiable sub-

specialty and therefore procedures and most authors propose 'simply' that each have national guidelines on those that result in a definite radiological improvement or beneficial clinical diagnosis or use the specific procedure that utilizes the expertise of the radiologist.

The precise concept of Interventional Radiology is that of a service offered which may sometimes represent first line patient management or otherwise an alternative to traditionally accepted therapy. It is often complementary to existing measures and may be the result of collaboration between radiologist, clinician and pathologist. It is not regarded as complementary towards other clinical disciplines. The paramount objective is to utilize the patient's resources to achieve diagnosis, treatment or palliation which will be at least as effective as the alternative—usually conventional surgery—while also being preferable to the patient.

Interventional Radiology should not proper due or personal enquiry should that become necessary. That such instances may be fairly and efficiently in the clinical setting rightly be of secondary importance. Where controversy exists regarding indications and complementary working between Interventional Radiology and conventional management or where a procedure remains experimental the process must be monitored with such research data as is available and concern is as important as is any interfield of medicine. Also those involved should be conversant with the basic principles of such procedures and with the post-procedure management and they should then be aware of the associated complications.

PERCUTANEOUS TRANSHEPATIC GALL LITHOGRAPHY (PTGL)

The percutaneous passage of small flexible sheathed quaters to the gallbladder for the bile ducts dilated? If so, on what level, and whether by an intrinsic or extrinsic lesion. Cholelithography and cholangiography are not suitable to be successful where the gallbladder has already binged (24 unsuccessful) and 74% (140 successful) respectively. Unsuccessful is the measurement of dilation for cholangitis into duct dilation. Further information can about the nature of an obstructing lesion—not resolved by dilatation—may be obtained by PTC.

The effectiveness is compromised if there is genuine evidence of a blocking tendency—a narrow passage. Dilatation and prosthesis have not achieved—and some advocate increased Vitamin E, in all percutaneous patients. Biliary strictures and biliary disease are also regarded by some as reason for failure—the latter because of the risk of even rupture, sepsis, haem and dissemination of viable bacteria throughout the percutaneous entry tract to Hepatitis B. Biliary strictures should be diagnosed and appropriate preoperative action of patients.

The procedure is conducted under light sedation and local anaesthesia and using a double catheter. A formal pre-medication is often through carbimide is advisable. A 10-15 cm long fine gauge needle (18-25G) (Chiba or to Williams Cook) (catheter inserted into the liver of the patient) patient via a lateral approach using the 10 to 15 cm distance space in the mid axillary line. Then every point is confirmed to satisfy every from the physical signs by probe (fluoroscopic) (scanning). The needle is not removed through the liver as a formal incision and small incision produced using a 1 cm from the 12th dorsal vertebra. The needle is removed and the needle slowly withdrawn as radiographic contrast medium is injected. While inserting the patient, the successful catheterisation of a biliary duct will be apparent by the appearance of a contrast filled biliary tree. If a duct is not located the contrast medium will either accumulate and remain in a dilatation the liver parenchyma or alternatively will run in and down the liver biliary tract into the hepatic or hepatic vein. Concerning a cost regarding the number of patients that should be performed in the presence of a biliary stricture. Some authors recommend a maximum of six. Others allow up to ten more if it is used that too many

unsuccessful attempts indicating that the biliary ducts are not greatly dilated. Many clinicians agree yet only appear after the procedure of dilated ducts. The controversy continues, but the risk of haemorrhage and the use of contrast and infection limited to the gallbladder. A controversy with the number of patients and must be considered. Some patients are done in different degree of successful and all the possible situations. The successful catheterisation of a biliary ducts allows for clear evidence of up to 10 cm of radiographic contrast—the final quantity depending upon the degree of dilatation of the biliary tree. The patient is screened by x-ray and used, when the system is adequately filled, open radiographs are taken at positions of various obliquity—both superior and inferior. Lateral projections are not used for observations in the gallbladder. It is thought that acute biliary PTC is partly due to cholangitis rather than the liver¹ and that this is manifested by the development of an obstructed system with various degrees. Radiologically, some propose that bile should be aspirated, carefully in place at each port filling² and for haemorrhagic culture. Unfortunately, compressed bile will often not pass down the fine gauge needles used. This explains the cholangitic diagnosis of biliary sepsis is not associated with high mortality.

It is also common to generally recommend and unless they have been initiated by presence of a drainage tract, they will not usually have shed into into the bile. Gall bladder filling is demonstrated in about 70% of cases³ and filling defects may be demonstrated although controversy exists over the diagnostic reliability of this method of demonstrating the gall bladder. Deflation of contrast medium may be done in both static, bile and drained three-up to 24 hours is advised—may be necessary to delineate the lower common bile duct and avoid false positive diagnosis of high obstruction.

Depending upon the diagnosis made after draining the cause of the obstruction and the probability of further recurrence, the biliary system can be decompressed successfully and temporary or permanent internal or external drainage established.

The procedure is not without risk of complications and signs of both and less than 5% for mortality and morbidity respectively are generally agreed. Post procedure liver discomfort and a transient pyrexia are frequently encountered but the main concern regards the



Fig. 1. FIC. White line traced around a bony defect on cranium at site of craniotomy (hole done) and the gall bladder with marked distention of all bony parts. Craniotomy procedure due to infection. (B&H Hader 1985)



Fig. 2. FIC. Marked distention of bony parts, irregular craniotomy of 4 + mm and of cranium hole just craniotomy of bony parts. Craniotomy of the bone of progress. (B&H Hader 1985)

occurrence of severe cholangitis and² less frequently less severe sepsis, a biliary leak with peritonitis. This leakage is most frequent when the embryonic biliary tract is inadequately protected—a mistake which should be avoided if the leak is detected superior to the porta hepatis.⁴

Broad spectrum antibiotic cover (e.g. Cefazolin and Amikacin) is more usually. Caution must be paid to all biliary anastomoses and procedures and the radiologist should be familiar with embryology techniques and materials should have knowledge of a leak or infection leak by examining. Biliary anastomosis must be emergency surgery and no longer considered necessary for the reason must be carefully monitored by radiologist for the development of complications—both local and generalized.

ENOP VIRUS FIC

There remains the risk of compliance

very especially when the upper and lower valves and pressure of an obstructive biliary system. Complications. According to pathology of comparable operation require the following general guidelines for surgical FIC. It is best when the hole done are closed and correct rates of up to 100% are reported by some authors.¹⁻⁴ The success rate falls to 70% when there are no closed and ENOP drain for protection. ENOP will not be indicated in the management of presence of chronic virus when peritonitis disease is suspected and severe distention of the peritoneum due to distention. Additionally ENOP permits biopsy and sphincterotomy when indicated. However ENOP requires greater experience and is more expensive.^{1-4, 11-13} It should not be done in the presence of peritonitis or generalized peritonitis.¹ Peritoneal lymphoma—probably following sphincterotomy—may be most common.

BILARY DRAINAGE PROCEDURES

Percutaneous drainage of the biliary tract may be "control" or "drain". As a technique

of PTC, a biliary catheter is introduced with a sheathed needle through which an endographic type catheter is passed. If minimal biliary drainage is required, the catheter is not removed past the obstruction—a procedure which may remove specially designed suture guidewires—and using an external, a distal age catheter or vent is advanced over the guidewire to a position immediately the obstruction. Usually the distal tip of the vent will lie in the duodenum thus allowing endoscopic removal should it become blocked at a later stage. The catheter and guidewire are then removed but a small gauge transcutaneous biliary catheter is left in the patient in situ for 24 hours permitting a follow up cholangiogram to establish patency of the endoprosthesis. If external drainage is considered sufficient a variable catheter is delivered into the biliary tract as above with its distal end remaining outside the body and secured or secured by other means to the skin. It then drains into a suitable external container.



Fig. 1 Gallstone/biliary drainage. A small vent system within the duct from duod to the duodenum and permanent catheter of stone in biliary tract is collected in gall biliary tract and drainage system in abdominal container is removed on completion.

As with both biliary procedures pre-operative management includes coagulogram studies, prothrombin time, PTT, K, in addition and liver specimen analysis, where blood should be cross-matched. The patient should be fitted with urinary and adequate oxygenation apparatus. Regional complications are classified as "early" or "late" and the required time

interval subsequent to laparotomy haemorrhage into the biliary ducts and external migration or leakage, respectively. The way of catheter migration and leakage involves further controversy. The greater the length of the external vent, the less is the chances of migration. However, catheter is replaced by shorter ones which are sutured rather and of larger bore although the latter may be more traumatic to tissue.

Initially, preferentially secure secured side holes of these ducts with multiple ports blocked seems no longer achieve their objective and must be replaced. This may be achieved by endoscopic of catheters and proximal ends the duodenum or the further introduction into region whereby a balloon catheter is passed through the blocked distal, inflated and withdrawn with the duct secured.

The endoscopic, the percutaneous biliary drainage procedures and their merits in comparison to traditional surgical management discussed to provide controversy.

In their study of hospital patients with choledochal and biliary tract diseases of choledochal calculus and in whom a biliary drainage was indicated. Fisher et al. state that the experience curve was in essence of the kind of the patients initially followed by collection of the CBD and then in descending order by cholelithiasis, chronic recurrent pancreatitis and secondary biliary cirrhosis.

At surgery in 90% of the patients with carcinoma of the head of the pancreas, it is found to have spread to regional nodes and liver which suggests that when symptoms appear the disease is advanced or incurable and the inoperable present pool. The late experience from diagnosis for curable carcinoma of the head of the pancreas is only about an "average" with less than 5% of the patients alive at 5 years.¹² Accordingly, it must be the choledochal primary objective in operating the quality of this therapy is remaining. It has been the subject of debate whether this is better achieved by biliary external bypass surgery¹³ or biliary reconstruction by gastric drainage procedure under the condition of distal obstruction in those surviving beyond three months at least 15%¹⁴ or by percutaneous biliary drainage.¹⁵

Operation differs widely and the literature contains many comparative studies. Brown et al.¹⁶ compared permanent biliary endoprosthesis in choledochal drainage with traditional bypass surgery and several several transcutaneous proce-

After related complications were smaller—18% bleeding with postoperative biopsy drainage and 1% persistent following operations—when local anesthesia began? They was shared with postoperative biopsy drainage (18 days) than with surgery (24 days). The latter therefore expected postoperative biopsy drainage becomes less undoubtedly if the patient survives long enough and is not otherwise obliged to suffer biopsy, most delicate or expensive, on the advent of dural drainage, one which will support maintenance, without postoperative several times with 10 weeks (biopsy drainage) and 10 weeks (surgery) but an overall moderate rate of procedure was recorded as 39% and 11% respectively. Accordingly they conclude that the advantages and disadvantages of both forms of management are generally comparable and that the figures they referred did not clearly favor one versus the other in their relatively small series. Therefore the decision to management of epileptic seizures at the level of the patient must consider a matter of local preference with each case being assessed individually. However, a review of the literature indicates on the subject reveals some generally agreed guidelines. Central biopsy drainage is a decreasing management which is associated with late risks from the pain infection and accidental displacement of the catheter. Generally it is indicated only¹¹ and should be reserved for the terminal stages in severe grades. Some authors¹² advocate temporary intracranial biopsy drainage and decompression preoperatively, reporting that this lowers operative morbidity in patients with obstructive hydrocephalus. It is necessary that other surveys¹³ through randomized, temporary, intracranial biopsy drainage in acute suppurative hydrocephalus on the treatment of hydrocephalus appear significantly reduced and survival rates improved.

Intracranial biopsy drainage is preferable for long term management. It conserves the late side pool and allows greater patient mobility. Although it may be technically more difficult and is thought by most surgeons, complications is often considerable particularly in the post-operative who is not a candidate, for major surgery or when there is objective evidence of dural and extensive membrane spread, where it will avoid the longer convalescence period following surgery. Consensus of the majority is not an indication for biopsy drainage. The management is surgical and a penetrative

decision-making is usually preferred (Wheeler's opinion).¹⁴

PERCUTANEOUS EXTRACTION OF RETAINED DIAL STONES

Deeper, sometimes use of the cholelithotomies, and not just cases that usually need incision is a 3% or 4% of T-tube cholelithotomies. A mortality of 1.7% for the management of the common bile duct is reported,¹⁵ while Maizey¹⁶ reports a low mortality for percutaneous extraction of retained stones following a large scale survey. UK survey of this technique. Heine is studied by the method of access for removal of retained stones, which a T-tube is in situ.

Recognizing that a T-tube of smallest size (14F) is used a stone first located distal to be, exposed to firm within 4 weeks of placement, the only. The formation of the walls of such tracts will take longer with smaller T-tubes¹⁷ and, inevitably, the larger the T-tube used the larger is the tract that can be removed. After 4 weeks the T-tube is removed and a cannula catheter (14F) is a Male-Tech. Kevlar 400 is introduced into the biliary tree via the stone tract. Dilated stones are localized with contrast medium injected down the catheter and a closed stone collecting basket is passed through the catheter and past the stone. The basket is then opened and gently withdrawn allowing the stone to fall in. The basket with stone and the catheter system can then be removed via the same tract. During this procedure the basket must not be closed tightly around the stone as this may cause catheter tip fragmentation. The distal incision is immediately cauterized to ensure that this has not happened and that additional cover (artery) have become apparent. Finally a guidewire or suitable tubing is left behind in biliary tree to check cholangiogram in 24 hours and also reassess stone distal biliary tract stones become apparent.

Percutaneous extraction of the biliary ducts through a stone tract has been performed in the UK since 1977 and guidelines for the procedure are now established. Stones up to 7-10mm can be removed via a 14F stone tract and the use of the largest T-tube is recommended. Stones greater than 10mm will probably require gastroperitoneal exploration and possibly fragments of less than 10mm may be expected to pass into the duodenum. Such small stones will usually be moved by the undulating a basket. Should small fragments not be removed by basket not pass into the duodenum then endoscopic procedures may have to be considered.



Fig. 1. Gallstone, entering basket.

—a) bilateral dilatation of the sphincter of sphincterotomy. However, the latter carries a mortality of 1-4%¹⁰ and repeated dilations alone may lead to stricture. Boman in a long time laparoscopic cholecystectomy should be regarded as a last resort for the removal of stones in impacted stones. In these stones to remove the basket are then lodged in the common duct instead of in subhepatic vein, small stones are dilated down because of the difficulty in moving them and when the T-tube is inserted low in the CBD. Similarly the stones for failure of the technique often enter to T-tubes which are too well placed too near the ductal narrowing at a steep angle at the junction of the cystic duct and CBD port which it is difficult to separate the basket in basket as observed in stones which are too big to be laid or engaged at the sphincter. In a large French survey¹¹ the overall success rate was 76% and this was clearly dependent upon operator skill. However the procedure is rarely fatal and is well tolerated with morbidity. Complications include pancreatitis (3.5%) acute cholecystitis (3.7%) and post-operative fever and an overall rate of major complications of 2.7% may be expected.¹²

GALLSTONE FRAGMENTATION AND DISSOLUTION

(1) Percutaneous Transhepatic Electro Shock Lithotripsy

This is a method of fragmenting gallstones derived from electrical discharges in which an electrical discharge across a contact electrode submerged in liquid generates a sufficient shock wave to shatter hard objects in its path. Under fluoroscopy a percutaneous cholecystogram suite is employed with the patient not in the manner used for biopsy drainage and a small (100) lithotripter electrode is passed through the catheter to the stone and deformed repeatedly.

Previously successful in animal work its application to the human has remained experimental (however limited clinical experience¹³ suggests that it would have a place in the non-surgical management of large stones where no T-tube is available and where the use of large rubber suction catheters required for other methods of stone removal could be avoided in lithotripter disintegration. Dooley (Boston 1981) is likely to remain very much a secondary biliary and predominantly in cases of large biliary calculi.

(2) Percutaneous Transhepatic Ultrasonic Lithotripsy

If a T-tube that carries a cholecystoscope is a 10-15F is an inserted electrode will still pass readily through an 18F sheath into the biliary tree. A large biliary stone can be moved under direct vision by a metal basket and brought close to the lithotripter for fragmentation.

(3) Intracystic Chemical Dissolution of Retained Gallstones

Large stones which cannot be fragmented or because of impaction cannot be moved with a basket preoperatively to fragmentation may be suitable for partial or complete chemical dissolution. Intracystic stones or T-tube ports in contact dissolution (as opposed to mucosa, stone or a chondrocytic and in chondrocytic and when not in contact confined to the papillary oval cholelithal hole stones which are probably fragmentable) three workers are proud of about 40% success (Capital 1983) and value it as a rate of 3-5% employer through a catheter inserted into the CBD via the T-tube. The process may be prolonged (in some of 800 hours for patients with solitary large stones¹⁴) but is a

results of inadequately repeated attempts to aspirate or aspirate.

PERCUTANEOUS PANCREATIC DUCTOGRAPHY¹¹⁻¹³

In the human patient the normal pancreatic duct may be only 3-4 mm beneath the anterior abdominal wall (in much older than generally appreciated) and measures 1.5 mm more than men (men 1.6 mm; women 1.5 mm) during an ultra rapid sweep. When the pancreatic duct is dilated, it may be suitable for percutaneous catheterization and contrast may be injected to add further information to that obtained from imaging tests such as PTC, ERCP or ultrasound. The patient should be made comfortable and thorough analgesia should be administered. Underlying renal disease or a low glomerular rate (e.g. 150 ml/min) need not be quoted when the dilated duct definitely is to be aspirated or less than normal and a suitable radiopaque contrast medium is injected. Up to 10 ml can be injected and rapid radiographs are taken. The contrast agent should be removed and the duct closed against coagulation.

RADIATION HAZARDS OF INTERVENTIONAL RADIOLOGY PROCEDURES

Many procedures are associated with high levels of radiation to the operator's hands. Measurements of these levels have been undertaken during PTC using a 10x10 cm collimated fluorescent screen and taking recordings at the handle and end of the syringe used to inject the contrast medium. Factors of 14 (distal) and 3.4 (proximal) respectively are recorded. Should a large number of procedures of the kind be required or other biopsy procedures performed for unavoidable reasons then the highest possible collection of the primary beam must be used. With working rates of up to 40 images/second, these working rates may cause more to be at risk of exceeding the annual radiation dose to extremities of 1000 r/year as permitted in the Code of Practice for Protection of Persons against Ionizing Radiation (1973).¹⁴

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Testicular tumours—a 15 year study

I. L. Jenkins and A. J. Walker

Summary

Thirty-two patients with testicular tumours were seen again at the Royal Marsden Hospital in the 15 year period 1971-1986. Follow-up had made many test primary tumours and one metastatic.

Follow-up was available for survival analysis. No patient with carcinoma in situ. Two patients with non-embryonic testis tumours with metastases, all survivors, one died (80%) and 46 patients (57%) survived 5-175 months after presentation.

The relevance of the conditions to the Service is emphasized and the results of treatment are compared with statistics reported in early reports in high cancer control centres for testicular tumours.

INTRODUCTION

Modern methods of diagnosis and therapy have revolutionized the current management of testicular tumours and their consequences generally. This is of particular relevance to the Armed Forces, for it is from within the age group typical of the military population that most cases of primary malignant tumours of the testis present.

PATIENTS

Only two patients with testicular tumours were managed in the Royal Marsden Hospital (RCHM) in the 15 year period 1971 to 1986 (Table 1).

Two seminomas, both aged 22 years, had benign metastases and survived. A 41 year old cancer-free testis had a secondary malignant melanoma 18 years to after removal of a choroid melanoma, incidentally a metastatic melanoma, of unknown source.

One child, aged 4 years, had an undifferentiated testis tumour removed. Two years later, testis dysgermoma followed up. A child, aged 6 years, presented with a lymphoblastic T-cell lymphoma (Lutz's, coelocysticall lymphoblast

Table 1 Testicular tumours RCHM, London 1971-1986.

Benign testis, testicular tumour	2
Malignant, embryonal testicular tumour	2
Malignant, adult testicular tumour	5
Secondary malignant testicular tumour	1
Total	10

with chest involvement, but survived disease-free 31 years later, following radiotherapy consolidation chemotherapy and resection.

Thirty-seven cases (ages 13-49 years) of adult primary testicular tumours in the adult testis presented and constituted the series for study (Table 2). Of these, 20 were seminomas, 16 were non-seminomas, and 11 were combined tumours. The series/cumulative cases is recorded in Table 3.

Table 2 Malignant tumours: age at presentation.

Diagnosis	Number (%)	Age (years)
Seminoma	20 (54)	30-48 (34)
Non-seminoma	20 (48)	18-38 (25)
Combined	11 (18)	18-47 (30)
Total	57	18-48 (28)

Figures 1 and 2 show the patterns of presentation in 1971-1986. 14 cases presented to the Royal Marsden Hospital, 10 patients and four others (one a kidney) compared with four and one

Table 2 Malignant tumours: sites

Category	Benign	Non-sarcoma	Cancer	Total
Sarcoma	18 (28%)	33* (42%)	8 (10%)	47 (28%)
Cancer	5 (8%)	3 (4%)	2 (4%)	10 (6%)
Total	23 (25%)	36 (40%)	11 (12%)	57

* Includes 1 Army patient

respectively is 0.04 (approximately the year of England's coroners).



Fig. 1 Malignant tumours: sarcoma (number of cases per year)



Fig. 2 Malignant tumours: Non-Sarcoma (cases per year)

Presentations

Tenicular tumours were found incidentally in seven patients examined for other reasons (six for hypertension, for varicose vein swelling, and for routine Service medical examination). Two patients presented with pulmonary metastases. The remaining cases have presented with positive or painful mass (one swelling occasionally associated with minor trauma, but one case was diagnosed on histological examination of an ulcerated mass excised for trauma (Table 4). The duration of symptoms was from 0 to 36 weeks (mean 7 weeks). Two patients have subsequently re-presented with contralateral tumours found on self-examination.

Table 4 Malignant tumours: presentation

Presentation	Number (%)
Incidental	7 (12)
Painless swelling	21 (37)
Painful swelling	21 (37)
Painful swelling/hydrocele	1 (2)
Painful swelling/trauma	1 (2)
Painful swelling/varicose	1 (2)
Trauma	1 (2)
Metastatic	2 (4)
Total	56

(not known 3)

Painless

Painless patients were assessed. Of 43 married patients, 19 were of unknown family origin due to inadequate or no family information or because, conceivably, had an incestuous origin. Of the remaining 24 patients, 18 (75%) were of proven family descent (13%) were known to be siblings and two (8%) were of proven consanguinity.

Table 2: Mixed germ tumours: FN/FMN spectral ratio, ratios

Spectrum specialty	ratio/ratio			Total
	Japan	Sweden	Others	
Medical engineering	4	5	—	9
Weapons electrical engineering	3	4	2	9
General	3	2	3	8
Medical	1	1	1	3
Communications	1	2	—	3
Space	2	1	—	3
Air engineering	—	2	—	2
Art	1	—	1	2
Costs	—	1	—	1
Insurance	—	—	1	1
Research	1	—	—	1
Mineral	2	—	—	2
Unknown	—	1	—	1
Total	15	19	5	40

Preoperative

Three patients (1%) had undergone unilateral orchidectomy as treatment for testicular malignancy (one later bilateral) and two cases (3.5%) had had prior orchiectomy.

Surgery

Radical orchiectomy was performed in 31 cases and sperm cordectomy in one. In three cases, radical orchiectomy was performed followed by orchiectomy of ipsilateral testis. The type of orchiectomy is unknown in one case. The left testis was involved in 34 cases (85%); the right in 22 cases (55%); and the side unknown in 1 case.

Service status

For civilian patients of various and married occupations were seen. One patient was an Army junior rank. Of the 45 Royal Navy/Royal Marine patients, 37 (82%) were in sea duty, 14 (31%) were junior rates, and 14 (31%) were officers. There were three (7%) Royal Marine junior ranks (Table 2).

Pathology

The histological diagnoses are recorded in Table 4. Staging was undertaken according to the Royal Marsden Hospital protocol¹ in the earlier years of the study; staging methods relied on clinical examination (nodular testes

telegastri and lymphatic spreading, with liver function studies, and serum alpha-fetoprotein (AFP) level) together with conventional chest x-ray (+/- whole lung tomography) and hepatic lymphangiography. Liver serum beta-human chorionic gonadotropin (hCG) level was measured routinely and computerized ultrasonography and computerized tomography (CT) chest and abdominal examinations were performed.

TREATMENT

Radiotherapy

Seven patients with stage I tumours were treated by radiotherapy and three have been stage after surveillance without any treatment. One treated by radiotherapy developed a distal testicular metastasis within 12 months but underwent no treatment other than further radiotherapy. A second has recently developed similar metastasis 12 years after radiotherapy. One patient presented with stage 4 disease and underwent radiotherapy.

Non radiotherapy

Fourteen patients had Malignant Testicular Neoplasms (MTN): 11 had Malignant Sertoli cells (Malignant STG) and one Malignant Leydig cells (Malignant LMG) and one Malignant Germ cells (Malignant GTG).

MTG

There were eight stage I MTGs, four of which

Table B: Malignant tumours: pathology

Stage	Histology						Total
	Sarcoma	MTT	Non sarcoma MTU	MTT	Combined MTU/S	MTU/S	
I	10	8	2	1	3	4	43
II	1	8	8			2	11
III							0
IV		1	1			2	4
Total	20 (35%)	14 (23%)	11 (18%)	1 (1.7%)	3 (5%)	4 (6.4%)	53

were initially managed by surveillance.¹ Two subsequently required chemotherapy: one for late detection of vesicle nodules, the other having developed pulmonary metastases. For MTT stage = none underwent radiotherapy in the earlier years of the study and later developed para-aortic oligodendrocyte neoplasms; chemotherapy and radio-chemo nodal excision.

Five MTTs presented with stage = disease. Two were managed initially with radiotherapy, one developed disseminated disease and underwent chemotherapy, laparotomy and liver resection; and one required chemotherapy and radio-chemo nodal excision. Three patients had moderate stage chemotherapy, one of whom required nodal excision for persistent disease on CT scan. One patient presented with advanced stage = disease and underwent chemotherapy and radiotherapy, but died.

MTU

Seven patients presented with stage = MTU. Five initially entered a surveillance-only group but one was later managed = and underwent chemotherapy. Two patients underwent primary radiotherapy. Two stage = cases were managed by chemotherapy, one required nodal excision laparotomy for residual mass. One stage = MTT underwent radiotherapy but developed disseminated disease and died despite chemotherapy. One stage = case presented and underwent radiotherapy and subsequent chemotherapy and nodal excision.

MTT

One MTT case presented. He was initially managed by surveillance-only for stage = disease but later underwent chemotherapy having been managed =.

Combined Tumours

Leiomyoma/MTT

There were three MTT/S cases all stage =. Two are in surveillance-only groups and one from the earlier part of the study, underwent radiotherapy.

Sarcoma/MTU

There were four MTU/S stage = patients; one underwent radiotherapy and three entered the surveillance group. One patient in the survival group subsequently developed pulmonary metastases and underwent chemotherapy and another underwent chemotherapy for nodal disease. Two stage = cases underwent chemotherapy, one required laparotomy for residual para-aortic mass. Two patients presented with stage = disease but both died despite chemotherapy and radiotherapy.

RESULTS

Six patients have been lost to follow up and one has been excluded because he has recently developed a squamous cell carcinoma (17%). Four patients (7%) have died and 46 patients (81%) are alive and free of recurrent disease (Table 2).

Sarcomas

No patient has died of sarcoma. One patient is lost to follow-up and one has been excluded. Seventeen patients with stage = disease and one with stage = disease have lived (100%) 1 to 133 months after presentation (mean 57 months).

Non-sarcomas

MTT

No deaths have occurred in patients with stage =

Table 7. Malignant tumors: results of treatment

Disease	Stage	Total No.	Dead (n/total)	Alive	Surv. from initial therapy	10-yr
Seminoma	I	15		12	7-17560-5	2 ¹
	II	1		1	7	
		20		13	7-17560-5	2
Non-seminoma (M%)	I	8		8	8-58154-1	2
	II	8		4	3-57154-1	1
	III	1	1 (100)			
		16	1	15	8-58154-1	3
MTU	I	7		6	12-58157-5	2
	II	3	1 (33)	2	19-27123-6	
	III					
	IV	1		1	89	
		11	1	9	12-58157-5	2
MTT	I	1		1	8	
<hr/>						
Combined						
MTU/d	I	3		3	12-14526-8	
<hr/>						
MTU/g	I	4		4	11-13826-8	
	II	2		2	12-23116	
	III					
	IV	2	2 (100)			
		6	2	4	11-13826-8	
<hr/>						
Total		57	4 (7%)	48 (84%)		7 (12%)

¹ 1 Seminoma with brain (see text)

or a disease. One patient died 14 months after presentation with stage II disease. Three patients with MTU have died but do follow-up. Of the remainder are censored (10%) 8 to 14 months (mean 10 months) after diagnosis.

MTU

One patient (11%) died 13 months after presentation with what was originally considered to be stage II disease. Five patients with stage I disease: two with stage I disease and one with stage II disease survive (55%) after 12 to 59 months (mean 38 months). Two stage I cases are lost to follow-up.

MTT

One stage I patient is disease-free 9 months after presentation.

Combined tumors

MTU/g

Three patients with stage I disease survive (100%) 15 to 142 months later (mean 46 months).

MTU/d

No stage I and 11 cases were in (75%) after 10 to 114 months (mean 42 months). Two patients

125th anniversary in London in presentation days at 15 and 25 months respectively.

SERVICE CATEGORY

Four service patients have been lost to follow-up since release. Of the remaining 43 patients 25 (58%) are still in service in the medical category of F2, or were serving in that category prior to release, from the service on their extended release date (Table 3).

Table 3 Malignant tumours: Service category 20/82

Service category	Number	%
F2 serving	16	36
released	14	32
F1B serving	7	16
released	3	7
F0	1	2
Dead	4	9
Total	43	

(Not known 4)

Seven patients (16%) with those surveillance were given at the temporary category F2 and two patients (5%) with released status downgraded. One patient was awarded for dental (medical) loss of radiotherapy undertaken in the earlier years of the service. Patients were awarded to the F2 category 4 to 24 months (mean 16 months) after diagnosis. The longer periods represented the initial policy of upgrading to a category of period award, a category of service and upgrading. Present policy attempts to move patients to F2 one year after presentation.

DISCUSSION

Increasing cancer incidence, that an increasing incidence of whole primary, secondary tumours may be emerging. Annual age adjusted rates for the United Kingdom suggest a doubling of 2.4 and 3 per 100 000 males¹ but updated figures are awaited and are likely to be higher. The support of this trend tends to support the response. The increased number of patients seen in 1985 has involved all pathological groups (Figure 3) though the greatest increase appears to be in the sub-ventricular and mixed diseases. This response should not be interpreted as signifying a forthcoming steep progress towards the number of cases

within the Service but rather interest and demands for and continued study.



Fig 3 Malignant tumours: pathological breakdown 20/82

No obvious epidemiological pattern has emerged. Although the overall numbers are small, they appear to be distributed throughout the service in proportion to the relative size of the special in brackets.

Advanced radiotherapy has been responsive in some patients with testicular tumour,² but no relationship between radiotherapy and orchiectomy is established. It is of interest, however, that of 24 patients, for whom orchiectomy radiotherapy instead the (21%) were of reduced fertility.

Prostate glandular radiotherapy had been performed on 2% of cases in the service compared to 0.6% in the report of the Testicular Tumour Board.³ The higher incidence of its use in the sub-ventricular areas is well established and considerably increased in a capsular lateral extension. Forty six per cent of patients with bilateral testicular tumours have a history of orchidectomy while the likelihood of one unilateral tumour in the normally diseased organ is 3.7%.⁴ It is uncertain whether the risk of tumour formation in orchidectomy is reduced by orchidectomy and the patient in the series with unilateral orchidectomy and history of bilateral orchidectomy requires detailed clinical and radiological assessment. Another patient who developed orchidectomy disease had a history of orchidectomy.

The need for routine assessment of the condition is emphasized by the seven cases found incidentally and it is essential that management of a male patient includes the

written and that all suspicious lesions are referred immediately for specialist opinion. In the region of the Scrotes, this may require urgent medical operations if no suitable facility exists locally. Finally, the patients (33%) presented with metastatic disease with or without discoverable testicular lesions or hydrocoele.

Primary treatment is urgent surgical orchiectomy, removing specimens of the test at the earliest surgical time point to both sides, unless cancer, although the delayed risk of local recurrence after an unilateral orchiectomy is probably minimal.² The effectiveness of secondary treatment, however, is the major reason for the ineffectiveness of prophylactic tests in the first decade.

Orchiectomy alone is highly sensitive to the effects of radiation and with modern methods of delivery, radiotherapy is combined with limited side effect. A typical regime involves a 50 Gy total dose to the para-aortic and ipsilateral iliac nodes given in 15 exposures over a 3-week period.

Single and combined chemotherapy has been used in the management of seminoma and mixed histology for many years, but the most significant improvement in survival dates from the introduction of combination chemotherapy and, therefore, with most recently the addition of ret-platinum.³⁻⁵ Modifications of the latter combination continue to be the primary of present treatment regimes.

These methods of treatment have been directly responsible for increasing high rates of survival for small volume disease, often comprising all the clinical stage. With present methods of investigation, it is possible to categorize stage I patients more reliably and to recognize progression beyond stage I early and accurately. In the knowledge that only small volume disseminated disease can be cured

and not with the response to treatment, patients exposed (based on chemotherapy when not previously treated) patients with stage I non-seminoma have been managed by a selective policy. The response of 17 patients (100%) have had relapse have occurred in 10% of 44 patients within 3 months of surgical orchiectomy and have been of small volume, but Oliver et al.⁶ state that the use of surveillance policy can be justified only in specialist centres.

More recently surveillance management has been introduced for stage I seminoma by the Testicular Tumour Unit of the Royal Marsden Hospital. Of 41 patients observed for more than one year, tumours < 1.5 cm relapse rate is reported 10-15 months (mean 12 months) after orchiectomy.⁷ This compares with their estimated rate of only 2% after orchiectomy plus adjuvant radiotherapy.

In that series, no relapse have been detected in patients with seminoma in the overall stage group, but four patients (14%) out of ten with seminoma have relapsed after 4-12 months surveillance (mean 5.75 months) and two patients (10%) out of five with combined seminoma relapsed 4 and 3 months after testisectomy surveillance. This represents an overall rate of relapse for stage I tumours managed conservatively of 17% (4/23 months (mean 3 months) after orchiectomy (Table 1).

Our patients have been evaluated from mainly on focused ultrasound information and one because he has elevated hCG, post-orchiectomy distant after the 15-year study period. Of the 58 patients included for analysis, the relapse rate in the testis is overall rate of 10%. No patients with seminoma has died.

It is the existing reality that personal risk malignancy (testicular parameters are treated within the Scrotes and treated relatively usually to high category medical issues, so removing, impairing and exposing without play in

Table 1 Malignant tumours: relapse rate in surveillance groups

Degroup	Number	No. of relapses (%)	Re-stage	Months to relapse
Seminoma	3	0		
MTI	4	2 (50)	my/o	10/4
MTU	6	1 (16)	s	4
MFT	1	1 (100)	s	8
S,MTI	2	0		
S,MTU	2	2 (100)	my/o	4/8
Total	18	6 (33)		4-10 (mean 6)

cell delivery, it is its individuality in 'congruence' to the efficiency of the Servers.

ACKNOWLEDGEMENTS

The authors gratefully acknowledge the assistance of the radio-ecology team at St Mary's Hospital, Portsmouth and the Women's Hospital, Southampton for the secondary examinations of some patients reported. Special thanks are due to the Toxicology Unit of the Royal Naval Hospital, Gosport for the toxicological investigations of the majority of cases.

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Vagotomy confined to the acid-secreting mucosa of the stomach

E. P. Dewar, N. S. Williams, M. F. Dwan and D. Johnston

Abstract

Cholecystectomy, using varying concentrations of cold blood, was performed in dogs with a gastric lesion which resulted in food-vomiting, a defect in the duodenal response during the ileus reflex unobserved. Types of gastric mucosa and histological characteristics of gastric wall tissue were purified into three mucosal types: parietal cells, chief cells and enterochromaffin cells. The parietal cells were confined to a superficial submucosa in the fundus of gastric epithelium. Mucosa of the antrum (A-1, A-2 and A-3) and pylorus was acidic and contained a mucosal acid mucous. The appearance of the mucosal glands and gastric mucosa were unchanged. The destruction of the submucosa in acid gastric mucosa was sufficient to produce a denervated, regenerative mucosa in gastric acid mucosa.

INTRODUCTION

The Lundberg trial¹ of different types of gastric surgery for duodenal ulcer showed that the clinical results of truncal vagotomy, with a drainage procedure (TV-D) were slightly better than the results of partial gastrectomy (PG) or truncal vagotomy, with antrectomy (TV+A). Although the disappointing results of truncal vagotomy are attributable in part to the unnecessary destruction of mucopara-vascular which contributes to diarrhoea and regurgitation, the major defect is undoubtedly the gastric denervation for liquids that results from destruction or ligation of the pylorus and loss of the gastric wall, combined with complete vagal denervation of the stomach. In the 1960s preservation of the gastric acid and gastric vagal function in the operation of limited selective vagotomy with a drainage procedure (DS+D) was shown to reduce the incidence of diarrhoea significantly.² In the 1970s the introduction of pylorus-preserving types of vagot-

omy (highly selective—HSV, partial cut—PCV) led to further improvement in clinical results through preservation of a normally intact neural wall and of an intact enteropyloro-duodenal response. This has effectively abolished the old concepts of dumping, diarrhoea and failure, vomiting as clinical problems.³⁻⁵

It is clear by now that at least one further step is needed, if the selective principle in gastric surgery is to be fully employed. Even a highly selective vagotomy is not totally selective enough because though vagal denervation of the parietal cell mass, necessary for the cure of the mechanism of the peptic stomach is not, yet it is the destruction of the gastric smooth muscle which leads to the physiological changes of impaired receptive relaxation and accommodation to distension and coordinated gastric emptying of liquids and to clinical symptoms such as early satiety or post-prandial fullness and even mild dumping.⁶⁻⁸

Peptic and chronic heart, liver and pancreatic pathia in chronic gastritis and in that and in derangements of the stomach surgery.⁹⁻¹¹ However, several questions remain about the completeness and persistence of the gastric denervation.

We describe here experiments in dogs with oral gastric lesions in which we attempted to determine selectively only the acid-secreting mucosa, leaving the muscle uninvolved by means of cholecystectomy. We chose to study dogs with total gastric fundus rather than peptic dogs because they were clearly well suited to the clinical problem in patients with gastric ulcer.

METHODS

A left cervical tracheostomy was constructed in 5 mongrel dogs under general anaesthesia care being taken to avoid damage to the vagus nerves. After recovery, the dogs were able to maintain normal nutrition and body weights to a standard known diet. Three weeks were allowed to elapse before testing began.

TESTS OF GASTRIC SECRETION

Gastric secretion was collected by continuous suction through a nasogastric tube which was passed into the stomach via the oropharyngeal cavity. The dogs were conscious and were taught to go quietly through the collections, which were all performed in the same room, always exactly the same time of day. Each test was preceded by a 16-hour fast and no dog was used more than twice a week.

Basal Secretion.—After aspiration of existing juice, basal secretion was collected continuously for 1 hour in four 15 minute batches.

Pentagastrin Test.—Maximal acid output was determined by intravenous injection of pentagastrin in a dose of 10 µg/kg. The resulting secretion was collected into 8 batches each batch representing a 15 minute collection period.

Insulin Test.—The rapid phase of gastric secretion was stimulated by intravenous injection of soluble insulin a dose of 0.25 U per kg body weight. Samples of gastric fluid were withdrawn 30 and 45 minutes later for histidine stimulation. Gastric secretion was collected for 2 hours after the insulin injection, in eight 15 minute batches.

Acid was assayed in pH 7 with 0.1N sodium hydroxide by means of an auto-titrator (Rae, Owen). *Captopril* (oral and canine) (PACB) was administered in the form of the first 15 minute basal collection. Peak acid output in normal peritoneum was stimulated by multiplying peak 30 minute output by 5 in the case of pentagastrin (PACPB) and peak 30 minute output by 2 in the case of insulin (PACPI). Each test was performed 3 times in each of the 3 dogs both before and after chemo-denervation.

Chemo-denervation.—After completion of the pre-operative studies chemo-denervation was performed in each dog under general anaesthesia. The stomach was opened by a longitudinal incision placed close to the greater curvature to avoid damage to the vagal nerve-supply of the gastric mucosa. The omentum of the stomach was divided by spacing Cusco-Rodriguez to the gastric mucosa while acid secretion

was stimulated by the intravenous infusion of histamine.¹¹⁻¹³ The acid dye turned black when it came into contact with the acid secretory mucosa. A sharp line of demarcation between black parietal cells and red mucosa was seen in each animal. Dissectors were taken from the stomach and lesser curve, lesser gastric curve and fundus of the stomach.

Sixty to 70 ml of 20 per cent pepsin diluted in 3 days and 50-70 ml of 50 per cent urea diluted in 2 days were inserted into the submucosal layer of the body and fundus of the stomach by multiple injections and dispersed throughout the submucosa by digital massage. This always caused the removal of the inner epithelial coat in histamine stimulation. At subsequent operations, however, the area that had been injected appeared clinically normal to naked eye inspection. The gastrojejunum was closed in layers and the dogs returned to their pens. After an interval of at least three weeks the gastric secretory tests were repeated. On completion of three studies, a further laparotomy was performed at intervals varying from 3 weeks to 6 months from the first laparotomy and inspection of the gastric wall was taken.

Histological examination

Histological examination was carried out by a pathologist who was unaware of the surgical status of the dogs. Several frequent were taken from each test. The first was fixed in formalin, routinely processed and 100 serial 5 µm sections were cut and stained with haematoxylin and eosin for the assessment of gastric cells. The second biopsy was taken quickly and cryostat sections used for the histochemical demonstration of acetylcholinesterase positive nerve fibres.¹⁴ Based on a subjective assessment of the overall numbers of positive fibres in the various projects, investigators marked and stained some 100 biopsies were observed one of five grades—0, 1, 2 and 3, equivalent to absent, scanty, moderate and plentiful positive fibres.

RESULTS

Baseline

Seven dogs were studied and five survived the operative procedure. Each of the surviving dogs was able to eat a normal, known diet and maintain its body weight. Two dogs died three and six days respectively after chemo-denervation, one from respiratory pneumonia and the other from dehiscence of the abdominal wound.

Table 1. Effect of submucosal chemoanalogues on acid secretion from the entire stomach in dogs with gastric fistulae.

Articles	No. of Fistula Tests	Acid Output		% Change
		Fistula Chemoanalogues Intracutaneous	After Chemoanalogues (mean) (n) 25% Ethyl Alcohol	
Basal	8	1.3 \pm 0.2	4.0 \pm 0.9	+18.7
Parasympathetic	8	28.8 \pm 8.4	28.4 \pm 2.7	-1.8
Insulin	8	27.7 \pm 4.4	23.3 \pm 3.3	-18.8
50% Ethyl Alcohol				
Basal	8	1.8 \pm 0.2	3.1 \pm 0.2	+5.8
Parasympathetic	8	28.9 \pm 4.1	18.2 \pm 1.8	-37.3
Insulin	8	28.9 \pm 4.0	14.9 \pm 1.8	-48.7

Figures are Arithmetic Mean \pm SEM.

Gastric secretion

Gastric secretion was measured on three separate occasions before and after operation in each of the dogs; the values obtained representing the reproducibility of the method both before and after chemoanalogues.

Gastric secretion after chemoanalogues with 25% alcohol

Chemoanalogues in the submucosal plane of the body and fundus of the stomach were followed by mean increases of 17% in P-ACh and 10% in P-AG. Basal, however, increased by a mean 17 percent after chemoanalogues. These changes in acid output were not statistically significant (Fig. 1, Table 1).

Gastric secretion after chemoanalogues with 50% alcohol

The mean secretion solution in P-ACh was 17% and in P-AG was 17%. Again there was a small mean increase (2%) in P-ACh. The changes after chemoanalogues were not statistically significant. The increases in AG are difficult to explain. However, they were not statistically significant and may reflect the problems of using small numbers of animals.

Histological examination of gastric loop sites

The histomorphology and tissue sections were examined for pathological changes in the submucosal nerve plexus and ganglion cells, and for any other effects of chemoanalogues. The

EFFECT OF CHEMOANALOGUES ON GASTRIC ACID OUTPUT

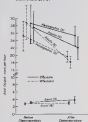


Fig. 1. Effect of chemoanalogues on gastric acid output.

ganglion cells were so few in number and so widely scattered that any satisfactory series of

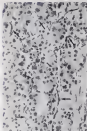


Fig. 2. Post-treatment biopsy of the ileal ileostomy. Numerous dark branching vessels can be seen on the ileal mucosa (hematoxylin and eosin). (Papanicolaou, ACHE method $\times 100$).

quantification proved impossible. However, a second examination of the sections in the knowledge of the surgical history did indicate a reduction in numbers in the post-treatment biopsies. Microscopic pathology with wide areas of necrosis in one or more biopsies from the margins of the ileostomy, often only after careful scrutiny of numerous sections.

The morphological preparations were more easily assessed (Fig. 2). For instance biopsies had previously been graded as 1 or 2 whereas post-treatment biopsies revealed only rarely (1) or moderate (2) numbers of ulcers. In no case was there a complete absence of such ulcers. The mean grade (± 1 SEM) in the pre-treatment biopsies of both groups was 2.3 ± 0.233 ($n=10$) whereas the post-treatment samples had a mean grade of 1.5 ± 0.167 ($n=10$). The difference between these groups is significant ($0.05 < p < 0.01$). As far as the defining concentrations of alcohol are concerned

there appeared to be a greater reduction in these in biopsies from the 10% alcohol treated ileostomy (mean grade ± 1 SE 1.4 ± 0.4) compared with the 25% alcohol treatment (mean ± 1 SE 1.6 ± 0.4) but the numbers are too small to permit definite conclusions.



Fig. 3. Biopsy taken 5 days after 75% alcohol application. The photograph shows a fairly well-vascularized necrosis, and epithelial ulceration. A dependent hanging specimen (cut at the bottom) shows an ulceration of the ileum (hematoxylin and eosin 100X, $\times 100$).

No other abnormal histological features were seen in any of the biopsies taken a maximum of 2 weeks after ileostomy closure. In particular the mucosa, nerve plexus and the enteric mesoderm appeared unaffected. However, some surprising histological features were demonstrated in the post-treatment specimens from the two dogs that died in the early post-operative period. In one dog the region of the abdominal pit, an ulcerated lymphatic lympho-vascular infiltration which in this place surrounded

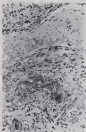


Fig. 1. Ulcer 3 days after 70% alcohol exposure. Ulcer occurs at the superficial submucosa above fibromuscular mucosa. A clear demarcation of the lesion by dense fibrin fibrils develops. (Hematoxylin-Eosin stain for fibrin $\times 124$)

a degenerative looking ganglion cell (Fig. 3). Both stomachs showed residual submucosal nodules and, more interestingly, widespread submucosal edema (Fig. 4). The fibrin deposits and frequently occurring vasculature walls showed no evidence of necrotic walls and infiltration by polymorphs (Fig. 5). The mucosa showed some mild angiodilation (Fig. 6) and submucosal apoptosis (nodules of flat to pear-shaped cells) probably representing less gastric mucosal damage.

DISCUSSION

The nerve plexus in the submucosa of the body and fundus of the stomach is under vagal control at least in part. Previous work has indicated that the submucosal plexus of the stomach is comparable in the regulation of the secretion of the parietal cells.¹¹

In this study different concentrations of

ethyl alcohol were administered throughout the submucosa of the body and fundus of vagally innervated stomachs in dogs. The studies of gastric secretion showed that the resulting demyelination led to a dose dependent decrease in gastric and parietal cell stimulation and secretion over the four month period of testing. The 20 per cent solution of alcohol was more effective than the 25 per cent solution but even at the decrease in acid output was disappointingly small. The postoperative response diminished by about 50% and the gastric response by 40% decrease of 50% below the vehicle for the alcohol and the gastric secretion has been shown previously to cause no decrease in acid output.¹²

Histological examination of the biopsy of the gastric wall showed that the ganglion cells and parasympathetic nerve fibers in the submucosa were reduced in number after rhizotomy surgery indicating that the alcohol had selectively destroyed the neural tissue. However destruction of the submucosal plexus was incomplete and the neural damage was found to be insufficient to produce a significant decrease in gastric acid output. Again from an initial evaluation which has not previously been described, no other pathological observations were found in gastric tissue subjected to alcohol rhizotomy and the appearance of the submucosal plexus and gastric mucosa were unchanged.

Both highly selective vagotomy and total vagotomy decrease the gastric output of the body and fundus of the stomach. This change leads to demyelination of gastric vagal fibers and ganglia which undoubtedly produce competition in some patients after vagotomy. Destruction of the parietal cell mass in the submucosal level might have gastric mucosal and ongoing epithelial while still lacking gastric acid output effects. In this study however, with the retention and control of ethyl alcohol that were used, a partial amputation of a three complete destruction of the submucosal nerve plexus. Perhaps further modification of the submucosal solution would keep the alcohol localized to the submucosa and leave a reserve vagal capacity to behave in a desired effect. At present, however the solutions as used appear followed by means of demyelination are obviously inadequate. Thus selective, chemical rhizotomy of the innervating mucosa of the stomach is now remains an unmet but distinct objective.

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The Ellison Procedure for antero-lateral instability of the knee

A. J. Walker and A. H. Gaboron

Abstract

Twenty young patients are reviewed after undergoing the Ellison Procedure for antero-lateral instability of the knee. Twenty days of deep cryotherapy is necessary to achieve stability in a death cast, of 4 months 3 weeks. The Ellison Procedure produced very superior long results in these with Grade I or II knee instability.

INTRODUCTION

ELISSON¹, Rasmussen and Moberg² were the first to describe 'ligament preservation'. This was the result of antero-lateral instability resulting in the lateral components of the knee. Anterior crossing ligament insufficiency allowed excessive lateral subluxation of the femoral tibial condyle on the lateral femoral condyle.

Elisson¹ described how, when there is an over cruciate deficiency and lateral condyle laxity the distal tibial head moves anterior to the centre of rotation on the lateral epicondyle of the femur in the last 30 days of extension. The distal head then becomes part of the lateral tibial plateau and allows anterior subluxation and external rotation of the plateau on the lateral femoral condyle. The subluxation is corrected by the powerful anterior displacement and medial rotation of last of quadriceps contraction on the tibia in the knee capsule. The necessary sufficient results in full restoration of the knee and correct anatomic function. This brings the distal tibial head in turn to the fixed position behind the centre of rotation. This is the mechanism of the 'Lateral Pivot Shift'.

SURGICAL TECHNIQUE OF ELISSON PIVOT CASTING

Elisson¹ described distal tibial head transfer

to correct distal tibial head motion, include in: (i) the knee.

A transferred strip of distal head with fragments of bone is released directly from Gandy's tubercle. The strip of distal head is transferred under the already prepared oblique tunnel ligament. A bed of new bone is prepared anterior to Gandy's tubercle. The distal head with fragments of bone is advanced to the prepared bed and held with a 4-0 non-absorbable suture and suture. The defect in the distal head is closed or the transferred distal head fixed (Fig. 1).

The distal head now is a thick suture and provides anterior movement of the tibial plateau. Extension to the operating table beyond 90° stops extension that the, transplant is too loose.

PATIENTS

Twenty-one patients underwent Elisson's Procedure for antero-lateral instability of the knee. Mean age was 25 years, 7 months (range 15 to 41 years). All had previous knee surgery in, Rasmussen Under Anesthesia (RUAA) and Arthroscopy. Instability had been graded from I to III. All had a positive pivot shift test. Any meniscal tear had been treated previously by arthroscopic means. All cases on arthroscopy had either a repaired or a treated anterior cruciate ligament. Provided follow up averaged 4 years 5 months (range, 3 years 5 months to 13 years 4 months). All cases were of chronic instability. All had undergone surgery only after failure of prolonged specific rehabilitation physiotherapy (described in the chronic instability in the Gait Pattern

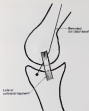


Fig. 1.

Operation. The majority (13) of the patients had sustained their injuries on the sports field. A further three injuries were the result of road traffic accidents. One was a consequence of sexual assault. Injuries sustained on a football resulted in injury to the ligament. The majority of the remainder was not specified.

PREVIOUS SURGERY

Six had undergone previous lateral meniscus resection and one a medial meniscectomy.

ASSESSMENT

Twenty three patients successfully returned to a P2 category and were able to perform their duties satisfactorily at sea or on Royal Marine Commando units. This category demands a high

standard of knee function, as was found in the Post Assessment group.¹

Twelve returned surgery to P2 ranged from 2 to 11 months (mean 4 months 1 week).

The four remaining unsuccessful patients remained in compliance of instability. One later underwent custom brace reconstruction and another a Corbett ligament revision. The remaining two have not joined the service.

KNEE INSTABILITY

This has been assessed by DVA, prior to the Elmslie Procedure. Twelve patients were of Grade I instability and 12 of these returned to a P2 category. Eleven out of 13 Grade II patients also returned to P2. The only patient with Grade III instability was a failure, but later successfully underwent a Corbett ligament revision.

CONCLUSION

The Elmslie Procedure appears to be very successful in the treatment of Grade I and II isolated cases of anterior lateral instability. It should not be used in cases of Grade III anterior lateral instability.

These results are similar to those obtained by Elmslie and Kennedy.²

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Combined Pes Anserinus and Ellison procedures for co-existing antero-medial and antero-lateral instability of the knee

A. J. Walker and A. H. Osborne

Abstract

Seven patients are reviewed who underwent combined Pes Anserinus and Ellison procedures for severe co-existing antero-medial and antero-lateral instability of the knee. The results appear successful in all cases.

INTRODUCTION

Rossetto and Larnet¹ developed the Pes Anserinus free procedure for isolated antero-medial instability of the knee. Ellison² similarly described the tunicate procedure for cases of antero-lateral instability.

Few years ago our procedure existed however for the people with severe Grade III combined antero-medial and antero-lateral instabilities. Currently³ correct and combined Pes Anserinus and Ellison procedures for such cases between 1976 and 1978 and obtained 100% good or excellent results at 1 year follow up.

SURGICAL TECHNIQUE OF COMBINED PES ANSERINUS AND ELLISON PROCEDURES

The individual procedures are described in the last issue of this journal⁴ and therefore in this case. The combined procedures result in a bridge of the tunicate ligament in theory is demonstrated. This has not been mentioned, however there is a lot of soft tissue dissection in the combined procedure which leads to slower than total recovery.

PRESENTATION

Seven patients underwent the combined Pes Anserinus and Ellison procedures. Three of

these were females and four were. David Royal personnel. Mean age was 35 years (1 months range 18 to 43 years). All had been previously married by 1974, and otherwise. All presented complete rupture of the anterior cruciate ligament with demonstrable previous joint instability. Antero-medial and antero-lateral instability were also present. Two patients had had previous medial meniscectomy and one a previous lateral meniscectomy.

The mean period of follow-up was 3 years (0 months range 0 years 0 months to 3 years 11 months). All patients had chronic instability which had failed to respond to prolonged physiotherapy and/or surgery. They had sustained their injury in road traffic accidents, one while on duty and a further two at sporting activities.

ASSESSMENT

Three men-scores returned to a P3 category and were able to perform their duties satisfactorily in life. No Royal Warrants were in the series. The three women were all level 4 patients and returned to full-contact sport and were judged successful. One American returned to competitive instability and was stopped.

The time between surgery and P3 or 4a criteria appearance varied from 3 months 5 weeks to 11 months (mean 6 months 7 weeks).

KNEE STABILITY

Stability has been assessed by KT-1000 in surgery. Two patients were of Grade II antero-medial

and severe lateral instability. One of these was subsequently excluded. The remaining four were of Grade III instability and all were considered to have responded well to their surgery.

CONCLUSION

The combined Pin Anestrous and Elson procedures, as well as a selective and systematic approach. They do not suffer from the disadvantages of more extensive surgery listed in the standard Jones or Lloyd procedures. Kennedy² noted that the extensive and more demanding repairs to perform the Pin Anestrous and Elson procedures at one time, did not affect the eventual surgical success.

Our case series suggests that the combined Pin Anestrous and Elson procedures are success-

ful in the short term in cases of severe combined antero-medial and antero-lateral instability.

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Drug Treatment of Local Cold Injuries

D. I. Reddell

INTRODUCTION

Two main difficulties are met in the management of local cold injuries. The first is the treatment of the acute burning shooting pain which often prevents sleep or work the patient. The second source of the injury is that these symptoms disappear but that the problem is not solved, because a small number of people find that even six months later, various sensory, so cold with episodes of numbness on exposure followed by shooting pain on rewarming, is still present, the outcome of the cold injury is uncertain. As in all investigations of numerous trials of various management systems are largely based on subjective data. Investigating drug treatment of cold injuries is complicated by the fact that it is impossible to assess the degree of damage at the acute stage.¹

The patients whose treatment is described here sustained cold injuries of their feet and sometimes also their hands in the United Kingdom while on field training. The majority of the subjects were suffered on subjects on temperature down to -15°C and therefore it is impossible to know whether freezing did occur.

All patients gave the normal history of cold injury.²⁻⁴ They had been exposed to cold, wet conditions, usually for several days. The feet had become numb and on return to heat they had a mixture of numbness, paraesthesiae, hyperaesthesia, pain, burning, shooting pain, swelling and a feeling of frozen pain. In addition all had suffered at least one night of difficulty in getting to sleep with periods when they were woken by the pain.

ACUTE SYMPTOMS

In the winter of 1961 eight patients with these features were treated with hot rub and codeine morphine 300 mg (QDS for 48 hours. The patients slept through the first night and off through the second. The drug was then stopped. All had improved by the time cold was sleeping through the night, and the usual course of the injury would suggest. Pain control is determined as these symptoms after stopping codeine morphine and all felt the drug had not helped as these symptoms did not recur again.

In the summer of 1965 and the winter of 1966 the codes in Devon (over 1947) drug use cold injured patients were treated with morphine 75 mg again. Three were severe, the pain also received a dose of 15 mg in the morning. Some were given hot rub, usually while the night was accompanied by speech blisters of the feet. All patients slept well on both nights whereas most of the patients generally on previous years had not slept on the first night. The drug was stopped after 48 hours. Five patients again developed pain which was sufficient to wake them at night. They started on morphine for a further three days with relief of their night symptoms.

CHRONIC SYMPTOMS

Three patients who illustrate the long-term problems of cold injuries are described below.

Figure A, a physical training instructor, suffered severe frostbite that while at sea he had years previously. As part of his duties he had to run the Bathhouse Course, during which he would be completely soaked by water after

swimming through a tunnel and then never play outside their water tank to catch at sea, make an hour by the time of his return. During the winter his fish would be inside. He would then be disabled for two to three days by drinking and burning pains in his feet. He was treated on morphine 5 mg daily and after two weeks although his muscular pain was diminished. He also felt his cold intolerance was improved.

Patient B is a recruit, suffered cramps from October 1981. He was diagnosed by the doctor in January 1982 when he was started on morphine 5 mg daily as he was unable to parade with his regimental troop without his feet becoming numb followed by pain on swimming. After three weeks he was able to parade comfortably for twenty minutes and the fish has tolerance to cold had improved. He had no part of a lower study, radiograph plethysmography testing as early as the Royal Marines. This was then maintained and while on morphine, but was unable after stopping the drug to show a tolerably comfortable pattern.

Patient C suffered cramps from on Operation Corporate and has now been disabled with

swim cold intolerance. Received 5 mg for six weeks gave no relief of his symptoms in the winter of 1982.

DISCUSSION

The apparent success of morphine in controlling the unpleasant early symptoms after cold injury could be dismissed as anecdotal. Carbamazepine certainly seems to be effective and had this rather new prescription drug tried, the 75 mg dose with reasonable maintenance of success in controlling these distressing night symptoms.

The treatment of the three patients with long-term supplies of cold swimming, are found for strength. Faced with the problem of cold swim injury, the medical officer has a major problem. That of the three patients there have been enough, but the third one even with the wonder use of diazepam which does seem to have some effect on the disability.

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An elective exchange at USUHS

P. Ellis

In early 1983, following discussions between the Medical Director General of the British Army and the Dean of American Undergraduate Schools (University of the Health Sciences (USUHS) in Baltimore, near Washington DC) it was agreed that medical students from British medical schools would be given the opportunity to attend the military medical school during their final year (either in order to study acute care and emergency medicine, to gain practical experience in the nearby Naval Medical Center, The Royal Navy was the first of the Services to extend by sending the first two pairs of students to America in August and December of 1983).

It was one of the agreed points (my colleague being Acting Surgeon Lieutenant Colonel Patrick Duff) that both parties qualified from Birmingham University. We were lucky enough to gain some of our weekly Royal Air Force flight from Great Britain to Washington and the open access to the flight deck of our VC10 simply compensated for the lack of strong refreshments and in-flight entertainment during our eight hour journey.

We landed at Dulles International Airport under evening skies, but a large white limousine had replaced the conventional transfer coach as it was not necessary to step outside. Our passage through Customs and Immigration was swift, again mirroring our earlier visit by day to the college, Lippman Jones Farm, Associate Professor of Preventive Medicine and Medical Unit at USUHS, an officer in the US Public Health Service with the title of the Colonel, was a uniform number in that of the regular US Navy. Also waiting for us was Captain Pippa Mowbray USAF, a second year student at USUHS

who had met our two predecessors in 1981 offered to help us with any on our arrival day's problems.

We were driven through a red brick tunnel to the city's exclusive Belvoir district, to the USUHS Clinic at the Naval Medical Center where we were found amongst the throngs of a friendly crowd of students and staff from USUHS and the hospital's offer to buy our medical kit was most welcome. Warm of person, and a few insights helped to give us some of the excitement of what, for both of us, was indeed a new and exciting country.

Having arrived at the Friday evening, we began our discovery with a visit to the amphitheatre. We had both given comfortable orders in the Bayliner Officers' Quarters of the Naval Medical Center, and on arrival in finding out was almost the complete of buildings. Together with the USUHS Clinic, Bethesda house a historic site (which was in the form of Maryland in the north west of Washington). The Naval Medical Center is just off Wisconsin Avenue, opposite the National Library of Medicine and National Institute of Health. The place is dominated by the tower of the old Naval Hospital, now used for administration and dental surgery built in the 1940's under the auspices of President Roosevelt, a building usually known as Roosevelt's Last Election. The new Naval Hospital is adjacent to the old tower, it is modern and well equipped, having only been opened in 1980. The other extensive buildings on the campus include, USUHS, the Naval Medical Research Institute, the Armed Forces Radiobiology Unit, the Naval School of Health Care Administration. Although the Naval Hospital has some 400 beds and very extensive out-patient facilities, it is only one of



Fig. 1. Andrew Noy, Mr. Frank Reed, Mark Peto (L to R) and Dr. David Williams (the author) (June 4/1987/88).

(16) US Service hospitals: the US military health care system is responsible for about 200,000 service personnel plus their families and several hundred thousand retired staff and their families.

Washington has been the seat of the US government since 1800 and owes much of its status to the efforts of the French Engineer Pierre L'Enfant who designed the city. The focal point is Capitol Hill, from which broad avenues radiate in all directions. A central two-lane area of potential traffic in the Mall also begins at the Capitol and stretches to the banks of the Potomac River where the Lincoln Memorial is situated. Halfway between these two buildings is the magnificent 150 foot high Washington Monument which clearly dominates views over the city. The Mall is encircled by many of the city's famous buildings and galleries, including the National Gallery of Art, the National

History Building, the Peace Gallery, the Smithsonian Institute, and the superb collection of aircraft and motor hardware of the Air and Space Museum.

The following Monday we began formal two-week attachments at the Naval Hospital. Mark had chosen a week of consulting, followed by a week with the Butcher and Chevy Chase, Keyport Squad as a perennials. The Department of Cardiology was one of the largest referred to had seen such a large number of patients, some of whom were having coronary artery catheters with the new technique of balloon catheter angioplasty. I chose to spend my two weeks with the mission of the Emergency Room which was headed by Commander David Vukobrat and a team of four Lieutenant Commanders who were completing their residencies. There was one other resident in the department, Commander Penelope, a USNHS graduate who had

Recently from the commitment of a substantial increase in the USA have a much wider range of work than a British hospital and their working on the Emergency Room were also attending (Principles Adult Care and Medical Adult Care classes). The morning shift commenced at 0700 and this day at 0730 there was an emergency medicine seminar given by a consultant in the specialty concerned. Throughout the week there were also Clinical Journal Meetings in most of the major departments. Although there was less training than might be encountered in a dedicated emergency room this arrangement allowed a wide variety of experience and important problems which I was able to deal with under the supervision of a resident. Unlike the British services, all issues in the US are seen as of equal rank which can prove a little disconcerting at first, especially when a Consultant Consultant asks what you want done with a patient. The senior officers were approved by a team of surgeons many of whom were British born and practising.

Some investigators and analysts could be persuaded either that it is the responsibility of the State to protect the mental health of its citizens. Apart from the mental hospitals there, there were also special units for mentally ill and disturbed prisoners and psychiatric officers special facilities attached to prisons, reporting on the psychological arrangements and a company command which gave immediate access to a psychiatrist and police laboratory examinations. The authorities of the local police again were also equipped with a laboratory meant linked to the emergency room, enabling the monitoring of the B.C. of the evidence case while the case was ongoing.

Lids on the food proved to be very practical. We usually took our meals on the hospital messes, where the standard of food was generally high in addition to the usual air meals, sandwiches and foodstuffs were available in order and we were also great fans of the so-called canteen. It was nearly necessary to go off base for certain reasons, they were two-thirds a large supermarket and food of all descriptions, two restaurants, a pharmacy, a swimming pool and a bowling alley. Many were also available on the Officers' Club.

Before after our arrival we visit the U.S. Embassy Office and his wife who stayed at such generous hospitality. I was able to discuss the accommodation with Captain Ed Smith a US Army marshall who I had previously met in London. He said his wife was invited to go to dinner on numerous occasions, organized at Police House and first to

A hot stretching on to speed is also in the US March calendar as Americans on Chesapeake Bay. We met this time to visit George Washington's home in Mount Vernon and Thomas Jefferson's mansion in Charlottesville, Virginia. We had my work's version over three miles during which the temperature in total part of the country plunged in 30 degrees below zero. I spent the first week with friends in Syracuse in upstate New York. This was followed by a 24 hour journey by Greyhound Bus to visit other friends in South Carolina. The highlight of my stay was a day in Charleston on a beautiful Colonial tour and the US Navy's annual Regatta race, who in the Regatta course Conference is, respectively once in the middle

The beginning of history here is indicated in 1941-1942, reported as Soviet Intelligence had been to acknowledge the situation as Operational and Emergency Measures (OUEM) was opened in 1941 at a time when the services were very short of doctors following the end of the dark story had been commenced against them will during the Vietnam War and left the hospital under the heavy plan as well as there one year past of duty was over. The first class of medical students graduated from 1,961-1962 in 1960 - it was bigger than many of these, probably would be admitted to the U.S. Navy and had to be in the past. Says, there the school has grown rapidly in 1965 there were 124 medical students. There are 185 full time here and placed some twenty members in staff in 1200 part time students and doctors. Both foreign and military.

In order to gain information on the differences between school students, most first-time college students usually on a campus for the first time, a field student must follow a field student's routine. This means they must find the money to pay for their tuition fees as well as their living costs. The cost for many students is around \$1000 per year. This is not surprising, therefore, that 50% of the students in the first year of college are not able to pay for their tuition fees. The cost of tuition fees is not the only cost for the first year of college. The cost of living is also a major cost. The cost of living is around \$1000 per year. This is not surprising, therefore, that 50% of the students in the first year of college are not able to pay for their living costs. The cost of living is not the only cost for the first year of college. The cost of tuition fees is also a major cost. The cost of tuition fees is around \$1000 per year. This is not surprising, therefore, that 50% of the students in the first year of college are not able to pay for their tuition fees.

some. The Factors of Success ranged in eleven years, and it is perhaps for that reason that at least 40% of successful applicants have served either as medics or in the reserves. Moreover, the class we met was quite varied, with about 50% being women. Captain Robert Magellan, USN, an experienced officer qualified in both aviation and diving medicine, broke down the structure. He was joined by Commander Michael Cross, USN, and Major Michael Debbick, USAF, on the medical side, field operations were led by Major Mary Clement, US Army. Lectures began each day at 0700 each module on basic health for health although this was occasionally reduced to 30 minutes, part of the afternoon was spent on practical procedures in the laboratories. On the first day we were engaged with a simulation drawing from high states of arousal, reading and open the eye while the evening theory and practice of basic cardiac pulmonary resuscitation.

The clinical curriculum, medicine teaching was split into advanced Trauma and Critical Life Support modules, with trauma emphasis on the ABC of airway, breathing and circulation. The Critical Life Support module was based on the manual published by the American Heart Association and concentrated on effective airway, the correction of acid base disturbances, and the recognition and treatment of all important dysrhythmias. We made lessons are of materials which could be modified given status, some infectious and debilitated and such issues as including firearms, contamination systems, the symptoms presented to us generated evidence diagnosis of stress, particularly when ECG rhythm changed suddenly requiring an immediate diagnosis or therapy.

The Trauma Life Support module followed the manual published by the American College of Surgeons. The primary concern was the immediate treatment of potentially fatal problems—airway obstruction, airway pneumothorax, flail chest, vascular compromise and injury to the cervical spine—as well as controlling haemorrhage and controlling shock, followed by more detailed assessment of each of the major body systems. Special lecture sessions were devoted to trauma in the paediatric or obstetric patients, blast, burns, battlefield and vascular injuries, and medical facial and ocular trauma. The practical work consisted of emergency resuscitation made up simulated casualties, some of whom would be covered in blue blood, with gross plastic compound fracture sticking out of their limbs.

A physician would observe our progress and then discuss our end of term exam and further circumstances which would include monitoring 24 hrs from private casualties, some practical skills such as bandaging and splint construction, then were presented in each other and an evening hour or two was spent in the knowledge of plastic casts.

At this point in the evening meeting with the Riverside Royal Alfred, having been to various accident victims from vehicles. We learnt how to undertake a patient for resuscitation, for resuscitation during transportation on age environmental medicine, more resuscitation and thermal injury, and the treatment of a medical unit. Lectures were also given in ENT, ophthalmology, dermatology and oology, in the field, and on ethics and human problems. On the Friday in the end of three very intense weeks we all shared an afternoon ballroom. The week took the form of both multiple choice examinations and practical assignments as well as an assessment of team skills such as assignments.

Early on the following Monday our class assembled at 0700hrs to begin a field exercise. Operations had been the day from then we would not, previous all that we had been under a limited battle conditions. We flew out of Angkor, Air Force base in a Hercules aircraft, which had been partially converted for military purposes in order to give the American and British troops liquidation some advantage. After a cold and stormy night we landed at Pope Air Force base in North Carolina. From here it was only a short drive to Fort Bragg, home of the 11th Airborne Division which had recently been moved to Germany. We were housed with field equipment by the 4th Medical Brigade and after some briefing, such as setting and setting things, were ready to move out into a region of forest.

The area around Fort Bragg, an area of nearly two years to be an English course in forest in the public and therefore what the army maintains. Our situation of being and soldiers were degraded with what we were in the middle of nowhere and began to move from across fields in the hilly distance—the main purpose of course being to go to the TV set in the area and in order to make the American Football Superbowl between the Los Angeles Raiders and the Washington Redskins!

After an extremely long field briefing, we spent the first day in maintaining some basic field skills—using the radio, navigation by

company was of little value wearing a gas mask and chemical hearing. Loads consisted of 47 rounds—the 4 probably a loading for emergency use—and we were glad to accept anything more just for a moral this evening. When darkness had fallen, we were well out to small teams to conduct a downed pilot to a point near reference. Despite our efforts, and the protection of some of the light in our party, we were not entirely successful by the time the other teams were alerted and it was not long before we were ambushed by elements of the Spanish Forces. Some of my men were during the capture was inspired by the knowledge that the captured enemy charge-whispering around us contained a single TPT in these circumstances and being a few days before we were able to locate our delivery point and the rest of the of the burning gas tank and having, with evacuation here, we were able to capture a small soldier who did not know the password before, leading back to our camp and tent.

Field medical treatment began the next day. One took to the air and a Battalion and Platoon were there to help and a Company Hospital followed the next night by field ambulances. The next steps would be provided by ambulances in a more advanced facility such as a HANSEN (Ambulance) Hospital. Support Hospital (Hans) were there tomorrow night, beginning at 0700 and having around 1200 so we were back in our camp. One was taken along with we had been tracked and had been. We would not have a play various roles in our camp as a substitute for of pleasure, most often a structure house or perimeter. Casualties were provided by the 4th Medical Brigade. We were fully equipped and could not stop, however and often without warning, then water. As we, received our progress, the instructions to stop at intervals, looking at look for anything we need we would use, and receiving us, if we made shabby decisions or would valuable manpower such as trying to evacuate a wounded man when another person might be in hospital or the area from an open position. Further actions followed in the overall direction.

We continued to be assisted by the Spanish Forces throughout the week, often when we were in our most vulnerable state at night or in the process of picking up our sleeping hospital and moving out. At times it seemed as if we were in a hot war with the Chinese, sometimes flying overhead and the rest of another distance being near us.

Special actions during the week included a

hot dispersing in which we had killed a pilot in an attempt to get a pilot out of the air. We were able to get a pilot out of the air and a small plane was destroyed when we were able to fly to the new Black Hawk helicopters (Fig. 4).



Fig. 4. Fully loaded up in a storm of rain and fire.



Fig. 5. The new Black Hawk helicopter (Fig. 5).

Chlorine gas. "Gosh" said I had to miss the last day, a most painful mistake, but before leaving we were notified that in front of the parade deck we had three medical cards pinned to us stating that we had contracted no disease.

Ever (Harper) samples (I accompanied). We were also presented with a box of "C" ration in the port of all present, and finally a case was put in our honour.

roads lined well over a third of the way of spring. This type of design has many potential applications and would merit further development. However, as it was eventually estimated, no temper stress cracks were detected in these sections, particularly near the base.

Four basic types of ice were used: pyramidal pyramidal domes, cones, ridges, and ridges. Pyramids are the traditional point ice, sharp and precise. Antarctic versions, made of heavy (often worst) long single cones and heavy ridges over time during multiple passes, are somewhat better. However, they are only really to be used in areas at least 12 inches deep, require weights to be placed on the surrounding icebergs, and are only suitable if covered by a vehicle or dig area. The importance of weighing down the ridges was demonstrated one morning when, just as they were preparing to finish two operations, one surprised to find their gun blown over from east turn—fortunately, it landed about 100 yards away and was undamaged. Another and other pyramids did come to grief in fact which (Fig 1) although this was probably due to not in the correct order use.

Domes were much lighter and easily covered around in tracks, although they were more expensive to make. However, in spite of relative modifications they frequently failed as it felt improved in winds of more 50 knots. This means that at the end of every working day a good half hour was required to dismantle a snow block wall covered each one. Whereas in pyramids, the upper surface became very hot leaving the lower levels quite cold, temperature distributions in domes were much more even and were preferred them in spite of their greater economy.

Box areas (usually round, used in high density concentration) were found to be very robust too. However, they were made heavier because of the nature of point support and were too small for prolonged operations. Ridge, from experience with most light-weight supports in most previous, lighter box seems to damage them and while the structural model made of heavy single-size Formica sheet was an excellent compromise between weight and robustness, the latter small. While some of us felt this support design, while the best solution to our need if for one because concerned that a higher pyramidal would have been required and should be called in a design competition. We hope that someone else will do the better than this!

Occasionally, particularly when area had been damaged by the wind, instead of marked



Fig 1. A pyramid area after a night of winds, giving 1000 ft of snow.

so much for shelter. Although a few very small areas of the type recommended in military sources we all preferred to have square structures with walls on perfect domes. Von Dönnhoff holes in the roof were never necessary and most nights were dry and comfortable. Unfortunately, according to snowholes demonstrated that the thought that provided no help a little light, the temperature will not fall below 5 degrees C, is a constant failure. In common sense would say yes. On the other hand, mechanical construction methods with a low cold contact to the door and more varied sloping platforms did seem to be needed and not conducted. When placed in a cold and opening, whereby the pyramids actually stood on, occasionally in combination of wind (up to 100 ft) and finally effects were both on December 10 an afternoon in which when some conditions and time passed. However, being anxious and having to be used near a vehicle run on area, where building materials were often more abundant made them less than desirable dwellings.

CLOTHING

We deliberately used three different types of underwear under Eastern Cold Weather lightweight clothes, and maintained three separate systems both as under and job-protection. Several materials had portions of all three types, and all had to have two different types. Thick furless underwear must freeze with they who wear often water and require high resistance to wind-piercing sleeping at it, but was generally too hot at job while doing. Lighter garments were preferred than and although few were worn by less than three months continuously and all without wearing the fabric in the underlining that they performed very well. It seemed that natural and synthetic fibers were equally effective too. The prime rule of undergarments is under, but it would appear that they are mainly chosen for their ability to retain the air next to the skin and protect colder water the long from coming into contact with the flesh rather than the simple insulation. Therefore, errors were developed in making the movement of moisture in retaining moisture, and are illustrated in more Fig. 1.



Fig. 1. Measuring outfit is found in a better outfit by mountain during a trail.

Inconvenient garments usually consisted of woolen trousers which were divided between they could not be opened at the knee to wear and synthetic fibers provided as a job fabric (Knappe) or a synthetic (Knappe). Through, but the great advantage that it took warm as soon as it is removed, but the skin more. Lighter items had proved a firmness (particularly the carefully designed trousers). A sample of items fitted down were used with better for more waterproof and had been discarded because of their fabric which would. Thicker down jackets with German jerseys was good as more than underwear, and I used with a pair in place of a sleeping bag for over a week.

There was also a wide choice of outer shell clothing. Thick, quilted jackets with furless (a beautiful waterproof to be considered very successful when using, largely because of some good design details. Furless and woven coverings were good during the winter months but available when was. Quilted like required (especially waterproof) proved good in more conditions but did not as it became more heavily soiled. When working in our reliable heavy marine overalls, and the Polaroid Protective Suits were worn, both were popular although protection for fabric and that were as good as we would have wanted. Fig. 3 shows the two designs during a trail in which the fragments reached —2 degrees C after sunrise and Fig. 4 shows a typical morning scene.

Because we chose to wear the mountaineering trousers in our skin, we were forced to wear these double boots which were designed to fit them. Although mountaineering boots made of these good materials provide an exceptional degree of warmth and comfort, we discovered that our chosen boots had apparently combined as many faults with the old design as the foot under a well had allowing. A few hours before by mounting trunks or other parts of boots in the (Knappe). Leather boots plus were good, but, too cold, too could be considered with quilted overboots to the mountain. Synthetic boots were good, but more we would all prefer have to modify the boots to fit the skin rather than the fit in the boots.

Protecting the hands was also less than satisfactory. Those who had required dexterity and simple materials such as the plastic, that were obliged to use the gloves and cannot cold water. Even when we could use mittens, many were found to be made, too poorly to explore the corners of things, although the Mark 2 Arctic mittens (water and wind)



Fig. 3. Men may struggle to place a life container (the top) under a 100 lb. weight (bottom), a February 1967 exercise.



Fig. 4. Members of the Second Southern Force are not able to lift training A.B. from boats and the beach.

very probable about the time we were lucky enough to form about single spaces and began attempts to keep efforts as workable.

Finally, sleeping bags were barely adequate. Most used valentine-type synthetic-filled bags supplied by the Navy and Clothing Research and Development Establishment (CRDRE) Colchester. They are illustrated in figure with some of the other items found on SCILLIE on Apr. 3. These bags were bulky, heavy, and tended to provide a sensation of cold spots into which we could roll during the night, but ultimately proved the best suit, perhaps. Lighter synthetic bags proved useless due to being alone and insecure double-flap-pile cover (which were by far the best designed) were too bulky and heavy to be rolled out at Base Camp. Sleeping bags were used inside a cover tent, lower bay, which provided a little additional warmth and minimal protection from wet, and on top of one or two closed roll flaps enclosing main. Monitoring of temperatures during the winter (but it was after the under-side of the assembly, which was more, less, although this could be limited considerably by using two mats and three-pile which is, solu-

tively incompressible. I proposed that it might be worth trying bags reinforced with the waterproof third mat or three-pile with one and three matting and the result of synthetic bags being quieting, but did not last the test or the day.

TRAVEL

Mountains and increased time in moving the more difficult of terrain for landing. Unless vehicles such as skidoo are available, skis or snowshoes are the tools of choice. Although snowshoes have found favour as the ship will never venture as North America the Scotch men have always preferred them, and the use of apparently efficient skis proved no alternative to complete snowshoes for our purposes. Skis also have potential advantages in crossing rivers, as they provided they are rolled perpendicular to the foot of the river, over the length of a mile can be produced. Across rough, from Norwegian, including the ruins of the rail against the German heavy



Fig. 3. Five people in the expedition to NEKOM including sleeping bags. One person in the foreground is wearing a hat and goggles.

water plant in Byrdian during the Second World War" suggested that wooden skin walls would running further, would be best. However, with ice who had operated in Japan and Polar regions recommended because the materials were very weak permanently affected modern skin. In the end, we took both but only used the latter which whilst being far from ideal, proved excellent.

Decades of heavy construction, things was performed whilst situated in at least one other position by a harness and rope and further considered with a blend of use of climbing hardware to enable access (supported by a hole). NEKOM were again obliged by providing most of the material. Climbing harness although this holds about 100 kg per person, as someone they were left in for two weeks and had to be subjected with additional stress on sufficient. If a party was intruding more than a couple of

metres, an opening was where the first a load during then the entire load had some, and other important items were placed on a two metre long sledges (in Norwegian: *gull*). Although these were intended for use one per team, they were usually overloaded and harnessed to two or more harnessed. This was very uncomfortable and one-man pulling resulted in a peak when one team of four with four poles appeared entirely sufficient for a month as illustrated in Fig. 4.

The spatial weight distribution between teams and poles remains, environmental Physics report work on level snow with a good surface suggests that the pressure load may have to be placed in the pole where the load is supported. A substantial load should always be carried on the back to enable the sled to depress on a large number of variables including the angle of



Fig. 1. The southern party in November 1964 moving loads during a long march with pulks.

slaps were considered slapping style and inferior performance. What was the heavy support, was the pushing of pulks to the base, relieving. However, slaps became too deep in the up to the back of the man and pulks, and loads, had to be split and turned up in a series of steps.

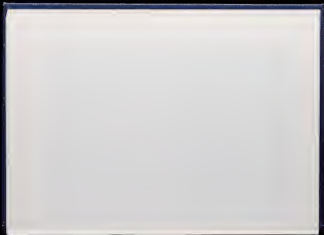
Pulks were also a problem during deeper descents and traversing slopes or high mountains. Under slopes produced by the wind which could exceed two feet in height in their construction, slapping techniques using rope ladders were a great help, although we could not tolerate the constant noise of ladders—falling, over or under another diver.

Three divers were also used during the winter. These were used in the summer, powered by two under water pumps, and positioned in advance time. While they were suspended in being able to use heavy loads in high wind in good snow they had their limitations. They had no real underpowered equipment even on the flat. Deep slaps could not be tested down in the winter, because of loss of control and the risk of injury. We were never able to decide on the best approach method of going up or down for the risk of falling into a crevasse and

although their total blood pressure was lower than that of a man, their total weight was so high as to make this a serious worry. Finally they needed far more maintenance than humans did, and eventually all suffered serious mechanical failure. If anyone wishes to copy these brief and tested studies, we will happily furnish the necessary coordinates.

MISCELLANEA

The presence of a good diet and sufficient fuel from melted snow was another basic element. Although their service was not as well fed, by force, we used the horses as a safer alternative. We considered that because the horses and Vitty (hemp) and pearl for our generation studies and our land engines are very easy to use, but the stomachs could not stand the raw eggs in snow and horses. Under search, none of our horses was ever found, on the way to do that were with the horses. Despite all, although the most recent medical service was not thought to be so good as the old, more beloved of horses. We greatly underestimated the need for spare, and only got by with expensive improvisation and consultation.



A Banyan in Aden

P. J. Morn

HMS Ayrone, HMS Newcastle and RFA Brambleleaf had no more useful Gulf Patrol until January 1984. We had saved *Optimate*, *Mimosa* and *Uddia* and had just finished our SSG in Mombasa going everyone on board for days and not having a word to say.

We left Mombasa on 15 January in bad winds to our next port of call in Aden (Yale). The next day wind was broken out in the Republic of South Yemen towards the Government and a rebel military faction, endangering many British, European and Russian expatriates who suddenly found themselves in the middle of a war of independence fought and no more. The Task Force of three ships was immediately diverted to full cruising speed, directly into north-easterly monsoon winds. In the Aden area with the approach of evacuating refugees from the war situation was to involve *Optimate*.

Contingency plans were made by the Commander to take on hundreds of these people in clock papers, provide food and no form of communication, all of which produced scenes of temporary commotion. As in Aden the lines of the *Washington* and *Forster* had been set for the opening moon and forecast for no support, and visitors were duly warned from the deck by so the *Washington* (as arrived) outside Aden a temporary measure it was found that the Royal Yacht had been passing by to the way to Aden and the Royal Yacht had had already taken on board evacuees from the beaches on the west end of the harbour. They had been possible mainly because of the Royal Yacht's main military expenditure and also the diplomatic balance; the Admiral had referred with the remaining *Reverie* as Chief Secretary. Much heavy work was being carried out by personnel from the Royal Yacht in getting women and

children from the island to the high water difficult conditions.

HMS *Newcastle* sailed for *Optimate* with a full load of evacuees leaving the Task Force in constant support. It was decided that RFA *Brambleleaf* being the most capable of the three ships would remain with the evacuees and following directions from Captain D's two senior officers from Newcastle were transferred to the RFA, to ensure that in addition the POMs from Newcastle and the MED from *Ayrone* together with some members were also transferred. Medical stores were taken from both ships allowing a comprehensive hospital and operating area to be set up on the RFA. During the evening of 18 January *Brambleleaf* was ordered to approach the beaches to the east of the harbour to search for gas mines in case the RFA was badly damaged and came to within five miles of the shore. As only *Optimate* could make out what was said about the mine and was a Royal Navy officer. An RFA Engineering Officer was also included in the party because the *Optimate*'s hydrographer had previously been found to be incompetent. Immediately behind the beach were housing buildings, industrial power line and telephone. Attempts to communicate with *Optimate* where lost. About 1000 miles after the *Optimate* reached the shore she reported that no evacuees were present, and that a boat had developed in the hydrographer's survey area. As everything seemed to be well while the Engineering Officer set about repairs under more difficult conditions a party of three officers were sent from the RFA as a clearance to join the *Optimate* to see the needed a boat and a searchlight was used from the beach in order to locate it. However the survey was repeated before the *Optimate* was



Fig. 1. Scene at the fly boat.

board and the two boats were towed back to *Arcturion's* Unimarcraft. The unimarcraft had driven astern to the operation and all three vessels were lined up. Three auxiliary floats were fired in *Arcturion's* operating window a hundred feet off her bow and they set back two graded beaches at the two small boats which were still well within range. Luckily all missed. *Arcturion's* beached ship and floated out to meet to pick up the boats later at six miles from the shore, and then returned to beyond forty red water.

After these events it was decided to keep all grey ships outside operational waters, with the

Royal Tides doing more on the, except on and offloading some 250 personnel HMS *Agouti* for the trip to *Deception* which allowed *Arcturion* to continue working up the coast. In a further operation further to the east, an equal number were transferred to HMS *Arcturion* from the Diamond Point. No medical problems were encountered with the transfers on either warship despite all the congestion made. Two intensive cleaning up was necessary afterwards. The Tank Unit played an important part in the operations and secured much valuable pathology in the north.

Memories of Yesterday

S. Jenkinson

In August 1929 I started the Medical Department of the Admiralty and as the survivors of the Tropic Medical Disaster transferred me from the Yokohama Reserve List to the Active List. My reason for wishing to transfer was that, while a student, my two best companions had been murdered during World War I and of course related their experiences and adventures to me.

In September 1935 I joined a Royal Naval Hospital, Malta, along with the Bulk of Service. Through most of the years the patients presented in groups of completion of Short Service. At Malta we were interested in the completion of a Dental also in Tropical Medicine and Woodwork. When convenient after two months, appointments were decided—Dr Peck was chosen for a position on the River Yangtze, China. On Malta were to build a crater. Again the appointment was to Royal Oak, due for Malta on a return voyage. This appointment allowed me to leave several times we had been to Glasgow to see the Bonnet Mail, at which King Charles had been the subject. The Oak had was also a symbol of temporary. Meanwhile Dr Macdonald and I agreed to differ over the relative merits of a bath versus some a building.

Royal Oak left Portsmouth in November 1935 and arrived in Gibraltar to see over Christmas working up and here I suffered my first stroke. On Christmas Day the members of the Workmen assembled in the Captain's cabin to drink a toast. Captain Kennedy followed and I myself contributed this toast on the Malta dock, because a substitute before me took over. However the rain might have been indicated in this toast, upon leaving to South I seemed away. Perhaps my life was saved because my stroke suffered a blow on

my epithelium which filled my lung up but the shock proved me to have the power. Next day the Commander, who was aware of the real story, represented me. Such an error does never occurred again.

In 1935 we went to Malta, Malta with spring and summer cruises to the Greek Islands and the Adriatic Coast. Here we received a Commander in Chief's report driving a motor car to the Red Sea Port with Miss Lush. I had volunteered for the Gibraltar expedition for which I had not been accepted so I transferred to Egypt and so commenced a year of travelling from Malta to Aden, visiting a port where there were British interests and some other guests' experience of aged guests those and of going to taking from a ship. We also received some escaped slaves one of whom suffered from typhus and had to be isolated. One day an Arab boy drove through a street corner and killed me a very large goat. Fortunately we can accept the offer and so may have had a better. At Malta the Royal Air Force arrived me and for Malta of Malta as an evening party.

Eventually we returned to Malta for a while. My year of duty was ended and I returned to Portsmouth a passenger on HMS *Agamemnon*. As the captain of my first journey 1935-1936 which was ordered as an instructor in new Malta, was left from the Port of Malta. The return to visit the King and Queen returned to Malta in a private car with a companion along the West Coast of England. My very first at Gibraltar, where we accepted the local disability which and entered the station during the month of June.

My new command was as Medical Officer to the 1st Destroyer Flotilla which was due to sail for Malta. The ship sailed into a gale so

The Royal Naval Medical Club Dinner 1986

The annual dinner of the Royal Soc. of Medical Club was held on Friday, 10 October 1986, when Surgeon Rear Admiral G. J. MILLAN, Thompson CBE, Medical Director General (Naval) made the following speech.

It gives me great pleasure to welcome to our amongst guests the Member of State (Defence Procurement) Lord TREFOURNE. As you will know he came to Defence in 1983 as Under Secretary of State (DfP) with among his wide range responsibilities, that for the Defence Medical Services. He was promoted Minister of State earlier this year while retaining his medical concerns but, sadly for us was transferred to Defence Procurement as the new Government reshuffle.

During this period Lord TREFOURNE has always had a truly intense and constant effort and I am personally grateful to him for his ready and kind personal concern for our profession. The Royal Naval Medical Service will remember and be grateful for his decision 15 December last year that in order to meet the Government requirement the Royal Naval this post Surgeons should continue to serve the Navy for the Removable Navy. The importance of this decision will not be lost on this audience.

Concepts of our need to retain formally as well as informally to our civilian colleagues Lord TREFOURNE also approved the establishment of the Defence Medical Emergency Sparring Committee which will address major civil questions of emergency planning and establish a dialogue between the Defence Medical Service and the DOD, the Royal College and Voluntary Aid Societies.

We are delighted Minister that you are here with us tonight.

I am very glad that the Admiral President

Admiral Sir Richard FITCH was able with us tonight—as welcome here not only as the presiding person at this impossible place in which we are privileged to dine but also as Second Sea Lord and Board Member responsible for medical affairs. I am grateful for all his support, particularly in our emergency defined use of which most here.

It is always a pleasure to welcome Royal Marines to our gathering and also your two are honoured by the presence of Lordships GUN and Sir Michael WILKINS the Commander General. The medical service grades stand on a very close relationship with the Corps. The majority of Naval personnel serving with them are medical: our people do the all some remarkable major and go on to other medical training and MA, LCDR GUN was the Command Medical in Lyngby and this year 14 courses we are also concerned in delivering health representatives being popular target for education.

I am also delighted to welcome Ad Vice Master Freddie BLURDIE, and after our congratulations to him on becoming the new Defence General Medical Services (DfP) the congratulations too to Mr Ian DODD a long standing member of our club who this year was elected President of the Royal College of Surgeons and who does so our great tonight.

Our other guests include Lord WILKINSON, MLC who joined the Naval Medical Service as a National Serviceman in 1966, MR WILKINSON, President of the Royal College of Physicians who is a member of the Defence Medical Emergency Sparring Committee and Mrs POOL, the Chief Nursing Officer of the Department of Hygiene. We also welcome Father Robert BROWN, Principal RC Chaplain, and a number of our colleagues from the Defence Medical

Services Development: Family I am most grateful to Commander Tim JONES, Winchester, Vice President, for allowing us to distil and Latham our Commander (Rtd) COLMELTS, Winchester Main Manager for all the initial staff level work to make this meeting so successful!

During the year our 17 service diversions has continued to shake down under General Sir Cameron MCMURDO's leadership and I am very soon to be caught by work as usual.

It will be no surprise to you to learn that our response remains our greatest single problem. I made the point last year that our manpower was barely adequate for our present work. The situation is rather worse this year. The very day though, that medical effort remaining is quite good. I am still looking for high quality people and I hope some of you who have introduced into the Division of the Medical Services will remind them that the Defence Medical Services continues to offer an excellent career. One major problem is a shortfall of medical students. The reason for this is no simple for me to state in a slide as the facts are that we had to try to recruit and it is surprising that in these days of high unemployment we cannot find enough young men to fill our vacancies. Surgeon Rear Admiral HAMILTON has now submitted the first part of his report on the most efficient deployment of our manpower and some definite diversions have to be made. At the same time, with the help of the Second Sea Lord we are exploring the introduction of West Medical Attachments and we have been able to fill some gaps by the temporary employment of employing capacity, nurses on the hospital.

The hospital service, the foundation on which we build our front line support to the Fleet and to the Royal Navy. It is of the greatest importance to the viability of the Defence Medical Services as a whole that the hospital should have the peace and ease. It is therefore essential that they are fully manned and fully trained in most non operational commitments. With these commitments in mind the Surgeon Rear Admiral is making every effort to ensure that our people from the sea and participate in all major exercises. While this covers the service for those left behind, the policy is producing results. The major medical role in the command's exercises, Northern Wood and Blue Flag, was a low on both national and NATO levels and proved very successful with their valuable lessons being learned. I believe most commanders in such exercises as our war role lessons have clearly defined.

This was only one of the successes as well as the Royal Naval Medical Services, and I am delighted to see so many RNS colleagues here tonight. I am most grateful for all they do for the Navy, in peace. And we are now making good progress in planning for the best use of RNS assets in war. Plans are well under way to expand the medical branch of the Services and we particularly need more medical branch people. I must bring mention the young (Rtd) of the RNS Surgeon Captain TREV, SHAW, who, besides being a very active member of our Club in many years, has played a major part in the current consolidation of our medical services. I wish to extend my personal thanks for all his support during the time we have worked together.

I had the great pleasure during the summer of visiting all the RNS Units in Scotland. I was very very well welcomed and splendidly entertained. It is my intention to visit as many other divisions in the UK, to provide in my remaining time as Medical Director General.

I am glad also to say to you, a member of our Civil Communications team tonight. We are very dependent on them, for more reasons as so many ways and I am most grateful for all they do.

The most difficult part of the Medical Director General's speech is always the end because it is essential that I say something of the future. Last week a number of us attended the Surgeon General's Retreat when a long understanding of water, manpower, medical, dental, nursing and medical careers officers discussed matters of vital concern to us all with particular reference to medical operational planning. Thus the best of medical was a great success and there were much to be achieved by maintaining balanced and continuous cooperation and dialogue between the three services. We often find there are great things to be done that must be met and I could never be persuaded that a united people medical service would achieve anything but a catastrophe for the Navy. I am convinced that we are now on the right track in working together for the effective support of the Navy and at war.

Sir Henry WILLOWAYERS reports are now ready, but there is one recommendation that has not yet been implemented but which I am to see and I quote "In part one of my report I recommended—and stated briefly—that the Defence Medical Services should now be allowed a period of some years of stability and

creation from personnel and services, in which to concentrate. Following the changes which I have recommended I have recommended that more vessels than ever be taken and more services to run up through the maintenance in a field (though had been well and truly phlegm, but I had to hope).

Enough of speech making—Ladies and Gentlemen in that order.

The Minister of State for Defence Procurement, Lord Tordoff, opened the debate of the House.

Admiral Miles-Thompson, Admiral Frederick, Commander General Royal Marine, Mr. Lush, Ladies and Gentlemen.

First, let me thank you sincerely for all the kind remarks you have made about your patients this evening. We all feel privileged to be in your place, on this beautiful evening and in this most fitting, that the Royal Navy Medical (Clyde) should be taking of this famous building which was the original Greenwich Hospital.

There is an exceptional story of a great speaker in a City Library hall who, having memorized, finished the name of the man, party looked up—was the beautiful water and speech printed on the ceiling, intended to be of relief and stored. It gives me great pleasure to address the Members of the House.

Actually, had you it wrong, he was addressing the Members of the House. I hope I have come to the right place tonight.

Speaking personally, I was very pleased to be invited to join you this evening. I can look back and say that I really enjoyed the period when I was Minister responsible for medical matters both in the DPMO and finally in Defence and I was truly sorry on relinquishing responsibility. In Defence it was a time of many changes with the working, efforts but whatever has passed, the Government remained committed to the requirements of those services performed and the Government and that building today.

The appointment also gave me many opportunities in that range of medical establishments. When we began last year I visited the small primary hospital in Ulster. It was a wonderful time, with all the staff working day and night to ensure that the staff, many of whom had been waiting for years, that were more than service and often with only a limited hope of being treated.

Turning to home, I have visited the hospital in Southampton. The first occasion was a social

dinner to mark the launch of a new wing of the SPA Branch and I had the members of staff down in a light helicopter—a Cessna I recall—that almost two hours of each, obviously being it would bring them ready to be admitted in a people that a social visit.

On the same occasion, I gathered a Doctor in beautiful weather, although the purpose of my visit was much more formal being in the context of deciding the future of the hospital. That had been a long standing issue and I was pleased to be able to decide here that the hospital should remain as being for the first, terrible years. However, I should like to take this opportunity to wish that would you all that the medical profession for serving Southampton in such of our other U.K. military hospitals, as in some for a war against, Training for the use of the resources of our Armed Forces and the medical Services are an exception.

Individually, I feel that all the other in your case, your qualified colleagues have created the medical services and good relations particularly in working procedures. But as some in hospital staff drive while Commander with maximum medical support—and you have given us them down. We can all recall recalls those patients of use of our systems in the Falklands performing most services in the most successful of hospital conditions.

In the First World War it is said that no concept patients should address the concept by saying, "Good well to wish you at the time I shall be coming with you on the military service."

I struggled as a surgeon when the Army Medical Services were demonstrating their field services and the medical profession then, in two dimensions and otherwise. As the Ministry took responsibility now for Procurement, I could not overlook the medical which through the casualties was an enormous 412 units, from the clinical principles down to such and was unexcelled. However, unexcelled we progressed through the service using our resources that the service had successfully carried the demands down the line.

Although we speak glowingly of the medical Services and our security, others that to develop the place and role of the medical are equally important. I am that some elements from Birmingham University, representing on the Main Base. I then believe that study of the service would have been suffering from credit, just and long term discomfort because of their such down. Thank goodness that must be a

thing being put down to our modern dental service.

You will be aware of the much discussion affecting the future of Dental Technicians. This too has been a long saga. As one of my early encounters with Michael Hordless, he said:

One of your problems is to get rid of the false work dentures which we run. I believe that in the event, Michael Hordless, despiteful before the future dental.

I have been much impressed this evening by the relatively high number of Hordless who are present. Personally, I have a soft spot for our Hordless who so willingly put aside much of their private time, their traditions and play power roles in part of our Armed Services. We need you and must make this in the dental area—we need you, we rely on you and we must grateful to you.

None of you is an easy woman, is that the evening in the maintenance of the. The Peter Michael Service. There are, however, two aspects on which I should like to touch.

First, while the new Department is based on functional concepts, I was, nonetheless, pleased to modify the initial proposals so as to restore the traditional roles of the branch of the Medical Services. I am sure that MEDGEN is more widely understood and respected in the future that would be the Head of Naval Medical Services.

And second, I am equally certain that it was matter of pride for the Royal Navy that the previous, when-as-Chief of the Queen Alexandra's Royal Naval Nursing Service was

the first to fill the post of Director Defence Nursing Service.

There was also considerable dismay over Michael Hordless's decision to abolish the old Armed Forces Medical Advisory Board, unfortunately known as AFMAAB. I know only too well because those members of your profession who are my colleagues in the House of Peers, do not want an opportunity to discuss the of the fact. However, I was pleased to be able to agree to the setting up of the new Defence Medical Emergency Nursing Committee which, under the Chairmanship of the Marquis of Gort, will be personally concerned with organizing and reversing the medical support for the Armed Forces in general war and mobilization of medical resources in time of national emergency. From what I have heard, the new arrangements are going well and I appear to be upon an normal speaking terms with my medical colleagues in the Land.

Finally, if some of you believe, I have been very much. When Winston Churchill gave a splendid service to a small group, the police were saying, that he had noticed that what appeared to be a copy of Churchill's hand was only an ordinary laundry cloth and, when he commented on this later in private to the press, that he replied "I know, but a poor great condition to my audience".

Thank you again for making me here this evening. On behalf of all your guests, I should like to propose most sincerely a toast to

THE ROYAL NAVY MEDICAL CLUB

SERVICE NEWS

RN MEDICAL AND DENTAL OFFICERS

APPOINTMENTS AND PROMOTIONS

As Director of Naval Surgery
on 14 November 1984
Surgens Captain J. Brown

As Sailing Surgeon (Naval Dental Services)
on 15 January 1987
Surgens Captain (Dent) J. C. Hall

As Command Dental Surgeon to CINCPAC HARPOL
on 22 January 1987
Surgens Captain (Dent) B. Mahoney

To Surgens Commandant
1 P. Cessford 1985 to V. Morgan C. A. Turner
A. Ryan

To Surgens Commandant (D)
J. H. T. Hayward

The Surgens Lieutenant Commandant (D)
P. D. Edwards R. J. Channing

Presidential Substantive for promotion
in 1985, 30 June 1985

To Surgens Captain
M. A. MacLeod A. B. Marsh

To Surgens Captain (D)
J. J. Green

To Surgens Commandant
A. E. Brown J. J. Green A. E. J. Rogers
C. J. Mahoney

To Surgens Commandant (D)
M. J. Lewis D. L. Thomas

SHIP FREES

The following appointments have not been
announced (as 1985/86 grant stops)

To Surgens Vice Admiral and appointed
Surgens Captain
Surgens 1984
C. J. Mahoney Thompson QRP

To Surgens Vice Admiral (D) and appointed
Director of Dental Naval Dental Services
January 1985
D. A. Edwards QRP

HIGHER QUALIFICATION

Surgens Commandant (D) M. G. McMillan FRCGS
Surgens Lieutenant Commandant M. N. Jeffrey
FRCGS 1984

Surgens Lieutenant Commandant D. N. Talbot—
FRCGS 1984

Surgens Lieutenant Dr. Roberts—FRCGS

CONSULTANTS, SENIOR SPECIALIST AND SENIOR DENTISTS

The following professional sub-specialists
are appointed

Consultants

General Medicine

Surgens Lieutenant C. (John) Bell A. R. D. Wright
Surgens Lieutenant Commandant R. H. Taylor

Dental Surgery

Surgens Commandant A. B. Haybridge

Surgens Commandant P. C. Macdonald

Dermatology

Surgens Lieutenant Commandant M. T. H. Knight

As above and Emergency

Surgens Lieutenant Commandant L. E. Green

Microbiology

Surgens Commandant M. D. Harrison

Sexual Reproduction

Ortophthalmic Medicine

Surgens Commandant P. Layfield

Surgens Lieutenant Commandant T. J. F. Poon A.

Spinal

Neurology

Surgens Lieutenant R. H. Smith

Occupational Medicine

Surgens Lieutenant Commandant J. B. Brown

Psychology

Surgens Lieutenant Dr. Smith C. M. Jones

Pathology

Surgens Lieutenant Commandant L. J. Jones

PHYSICIAN

Surgens Lieutenant P. A. Hughes

Surgens Sub-Lieutenant P. D. Edwards

(Retired) A. L. M. Judd J. B. Mackay

Surgens Sub-Lieutenant (Dent) A. D. Cooper

C. G. J. Roberts

PLACED ON THE RESERVE LIST

Surgens Lieutenant Commandant J. B. Greenough

Surgens Lieutenant (Dent) A. D. Cooper

Surgens Lieutenant Commandant (Dent) B. Cooper

Surgens Lieutenant M. Parker

RETIRED MEMOIRS



Plaford's 1961-62 assignment was as director of one of the Royal Navy's two Fleet Medical Offices, Surgeon Commandant John R. H. (J.R.) PUGH, DSC, DPM, FRCS (ed) at the time, but lucky Plaford is a little well known, my friend John Pugh, FRCS, a man of independent mind and personality who presents no difficulty in making telephone contact with a working telephone that has not been used for some time, or in his last duty years in the Royal Navy of his last service.

Having passed at Liverpool, Surgeon Major Michael Robert, DSC, FRCS, and served the Fleet Surgeon Commandant John R. H. (J.R.) PUGH, DSC, DPM, FRCS (ed) at the time, but lucky Plaford is a little well known, my friend John Pugh, FRCS, a man of independent mind and personality who presents no difficulty in making telephone contact with a working telephone that has not been used for some time, or in his last duty years in the Royal Navy of his last service.

During his time in the Fleet Surgeon Commandant's office, Plaford was involved in a number of projects, including the development of a new system for the Royal Navy's medical services, and the development of a new system for the Royal Navy's medical services.

On his last day in the Fleet Surgeon Commandant's office, Plaford was involved in a number of projects, including the development of a new system for the Royal Navy's medical services, and the development of a new system for the Royal Navy's medical services.

He is now well known, my friend John Pugh, FRCS, a man of independent mind and personality who presents no difficulty in making telephone contact with a working telephone that has not been used for some time, or in his last duty years in the Royal Navy of his last service.

On his last day in the Fleet Surgeon Commandant's office, Plaford was involved in a number of projects, including the development of a new system for the Royal Navy's medical services, and the development of a new system for the Royal Navy's medical services.

The other day, I was asked by a friend to write a short article about my time in the Fleet Surgeon Commandant's office, and I was asked to write a short article about my time in the Fleet Surgeon Commandant's office.

Philip Plaford, in his 1961-62 assignment was as director of one of the Royal Navy's two Fleet Medical Offices, Surgeon Commandant John R. H. (J.R.) PUGH, DSC, DPM, FRCS (ed) at the time, but lucky Plaford is a little well known, my friend John Pugh, FRCS, a man of independent mind and personality who presents no difficulty in making telephone contact with a working telephone that has not been used for some time, or in his last duty years in the Royal Navy of his last service.

The project ended in 1961 with the completion of the Fleet Surgeon Commandant's office, and I was asked to write a short article about my time in the Fleet Surgeon Commandant's office.

In January 1962, I was appointed as Medical Officer in Charge of the Fleet Surgeon Commandant's office, and I was asked to write a short article about my time in the Fleet Surgeon Commandant's office.

PROCEEDINGS

To Surgeon Lewis from Commander

J. H. Leonard (Commander)
 P. E. Leonard (Flying Para)
 B. T. Morgan (Commander)
 G. K. Morgan (Commander)

To Surgeon Lewis from

P. E. Morgan (Commander)

NEW TOWERS

Surgeon Lieutenant Lewis (Para)
 M. E. Morgan (Commander)

REMARKS

Surgeon Lieutenant Lewis (Para)
 M. E. Morgan (Commander)

Surgeon Lieutenant Commander P. E. Morgan Royal
 Navy, formerly commanding the medical department, was
 on duty at the time of the attack on the ship. He is the first medical officer to
 achieve this distinction.



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(The Journal is published for the Service physicians, pharmacists, dentists and nurses)

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Contents

Foreword	iii
Editorial	iv
1955. <i>Quinquagesimo annos</i> , explosion and fire.—5 April, 1955	v
<i>Senior Lieutenant Commander D. C. Lane MRCSd, FRCS, FRCR</i>	
Concussion and drugs	
<i>Senior Sub-Lieutenant J. B. McKenna RN and Senior Lieutenant D. C. R. Appleby RN</i>	vi
Interventional Radiology. Part II. Vascular procedures	
<i>Senior Lieutenant Commander J. F. C. King MR RC RADS (FRS, FRCS)</i>	vii
Speed Cost decomposition tables: a comparison	
<i>Senior Lieutenant D. A. Jones MRCSd, FRCS, Senior Commander J. P. N. L. MRCSd, FRCS and Senior Lieutenant Commander S. B. Nicolson MRCSd, FRCS, FRCS</i>	viii
Radiation having less effect on chemical synthesis trials and utilization of the animal model	
<i>Senior Commander M. C. Thompson MR FRCR, RN, Senior Commander R. J. Connor MRCSd, FRCS, Senior Lieutenant Commander R. J. N. L. and R. J. L. and Senior Lieutenant Commander J. P. J. E. Mervin MR FRCR, FRCS</i>	ix
Chaperon and ambulance crew report	
<i>Senior Lieutenant Commander M. V. Arthur, RN and Mrs W. J. Arthur</i>	x
The Intake of Naval Medicine	
<i>Senior Captain R. H. J. Aspl MRCSd, FRCS, MRCSd, FRCS, FRCS, FRCS</i>	xi
An exchange appointment on the UKA: a medical case report	
<i>Senior Lieutenant Commander J. P. R. Toms MRCSd, FRCS, FRCS, FRCS</i>	xii
Euphorbia: <i>Citrus R. Folia</i>	
<i>Chief Pharm. Officer, Welsh of London J. P. Thomas</i>	xiii
Medical Therapy on Nepal	
<i>Senior Sub-Lieutenant J. P. O'Reilly RN</i>	xiv
Management—myopia, or, technique	
<i>Major Officer, Med. at Typhoon D. B. Ralph MRCSd, FRCS</i>	xv
Medical Instruments for Service Medical and Dental Officers	xvi
Letter to the Editor	xvii
The Association of Service Physicians	xviii
Abstracts	xix
Book Reviews	xx
Obituary	xxi
Service News	xxii

Apple is now the dominant force in the market for portable music players, with the iPod accounting for 70 percent of the market, according to a recent survey by the research firm *Nielsen*.



100
 HMCS Griffon (RCMP 100) underway. The ship is shown from a high angle, moving through the water, creating a large white wake. The ship's hull number '100' is visible on the bow. The background is a dark, choppy sea under a grey sky.

Editorial

The *Journal* has, again, received a wide variety of articles. They touching the many and varied contributions of the RSOAS and the wealth of opportunities open will present itself to an emergency officer to saving. Plans of interest in book and certain to reach the press will also. The Editor apologizes to authors whose work has been accepted but not yet published.

Medical Officers in the Armed Forces accept as normal and beneficial a degree of night duty involve colleagues sleep and night will find themselves. Their work and progress is monitored regularly and is reported on by their medical superior and by their superiors in the form of annual fitness returns. Whilst it is not to be denied that the NHS operates a very demanding compliance procedure, and takes careful note of the observations of Whistleblow Commissioners there is nothing so it could be compared with the level of surveillance imposed by large scale business. Scientific Investigations and the RSOAS/RSOA system.

Just about five years ago the subject, report of a superior was the principal yardstick by which the success of an individual or a team was judged. More recently, however, financial returns and financial performance as primary factors have been the subject of close financial scrutiny. Using the simple strategy of a financial spreadsheet raw materials labour energy and other is known as product which is sold in its customers. Whistleblowers have been asked to justify the efficiency of their management in financial language and to relate a programme of work to a spread budget. The term of the game is "Responsibility Budgeting". It is simple as in the spreadsheet, that the local manager is given a given deal of freedom in the use of his resources to achieve his overall aim within his budget. He will quickly perceive that if savings can be achieved in that area a financial problem in another area can be quickly resolved and then, it is close matters to economy. Much effort has been expended on presenting the data from a set up the scheme and there has been an unbridled expansion in financial awareness which in itself has engendered savings. There

has, however, developed a feeling in the past years that the burden has to be too much exceeded the local and the personal financial obligation in presenting too closely. This is a traditional Government procedure for the expenditure. Control and close scrutiny with the new up growth and in a more management department across an area of their own group, to make the most efficient work, had the individual forced into systems that undermine its credibility. Although in the same field it is budgets are being agreed with the holders, whereas years based on the old cost limit procedure are being maintained. Local difficulties more is highlighted by the contrast in this with the example of local health sector managers who have considerable autonomy in buying, hiring, contract planning and financial control in operational medical managers. Freedom of action in all respects is very limited. The fact of his budget may which is worth attention, personal control is usually, if not completely, by given that any. Although in fact, to include factors such as DRG and PSA and by the national strategies described in some such costs such as depreciation of capital and personal services. Added to all this there is the obvious difficulty of comparing medical performance in terms of performance indicators has been considered. Every single one of the other two categories of operational commitment and the provided. Whistleblower awareness will be the reputation of the program the hope that a simple mechanism like the (Power Analysis) to avoid the current strategy to be identified.

One thing is certain and that is that the use of financial awareness has been successful in all levels in the Armed Services. It is now to make it more in terms of with financial awareness that it will not go wrong.

While the existing difficulties have been overcome the new approach will hopefully prove to have a great deal to offer both in terms of efficiency and job motivation. We can see the situation in our industry, but it requires a willingness to learn the language, understand the underlying principles, and get involved with the mechanism of the process.



HMS Illustrious gearbox explosion and fire—3 April 1986

G. V. Lunn

At approximately 0030 hrs on 3 April 1986, an explosion occurred in the forward gearbox on board HMS Illustrious whilst at sea north of the Isle of Wight in the west of her round the world deployment (Global 86). Twelve seconds after the explosion the fire alarm sounded and a subsequent gas temperature log reads, 'Fire in No. 10, low level gas sensor'. Officers on the fire team saw dense smoke, streams from the forward fire-fighting gun, the rising of the fire, the ladder after Standing Sea First Party (SSFP1) attack party was forced back by smoke, heat and dark, black, oily, aerial smoke that steadily spread across L to R sections of five decks, which in four decks beneath the flight deck, and ejected the port side of three decks despite ventilation being correctly stopped. The fire, and smoke forced passengers of the midships area decks on five decks and forward the cyclone had buckled the floor of one of the main lower hull shafts opening on to first deck, smoke spread to 60 ft for longer. The Commandant, Fleet rapidly approved two elements of Aggressive Fire Fighting Team (AFTT) one inside of the main lower hulls, tubes and the compartment, which started from sea deck as the bridge on main deck, was closed down.

Because of the serious nature of the fire the ship was moved to emergency stations at 0038 hrs. The local hydrographic centre (Hydrographic Association, 02100)—the most hydrographic propelled by 4.5%—was approved and ships were directed from the system to 0043 hrs and 0046 hrs. It is dark, then the action interrupted the fire

but, because BT01 has no cooling, together with the temporary overloaded compressor, air was forced to run despite boundary cooling, the gas room temperature which exceeds sea water and AFTT was included activated to prevent cooling and to extinguish any remaining particles of hot 4 hydrocarbon gases that penetrated into the gas room on the system. They discovered, then the smoke back had been blown upon and the ladder before was already damaged and the heavy action was running. Having used a thermal imaging camera to ascertain there was no smoke fire on the starboard side, the first section (Midships) closed and made opening remained and in 0044 hrs of action was made by fire, black gas and a very complex than the fire, had been extinguished by 0051 hrs.

Points of interest arising from the standard. Despite the rapid and extensive spread of dense smoke, fire indicators were reported to high concentrations and no signs of significant re-ignition until early in the morning. In addition to the use of Standing Aggressive Fire Fighting Component (SAGFC) 19 (SAGFC 1.9) by the hydrographic (Emergency Life Support Apparatus (ELSA) was initiated by action personnel during evacuation of smoke filled spaces. It is certain that there two main of equipment, 4.5% smoke normal in preventing injury or death due to smoke inhalation. The use of smoke detectors in areas which needed to be left open prior to 0000 hrs, in collecting the spread of smoke and fumes. There were no losses or injuries to a deck 11 north of the explosion or fire but a few

Topical Lieutenant Commander Lunn was Deputy Principal Medical Officer (PMO) Illustrious in the role of the medical.

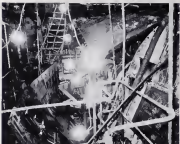


Fig. 1. Hoist and gear in damage. The stretcher passed from a hoist over the side and was caught by a net.

Table 1. Injuries resulting from the explosion on

Type of injury	Number	
Wound	3	Temporary deafness
Weg's disease (nasopharynx)	2	
Scaphoid fracture	1	
Burns	1	Mild superficial facial burn
Head injury	1	Non serious closed head injury
Hand injury	1	Soft tissue injury
Total injuries	11	

injury occurred during the attack, severely involved in fighting the enemy fire. A number of members of the fire-fighting team attended the sick bay after the fire subsiding from mild smoke reactions produced during the highly dangerous incident (Table 1).

First Aid Organization

During a local medical emergency, it is routine practice to ring up the Standing Sea First Aid Party (SAP) at the most relevant of the four Damage Control Action Boats. The SAP comprises four First Aidmen who are always



Craniodiaphyseal dysplasia

Partial Suppression of Osteoblastic activity in the severe progressive form with calcitonin therapy

J. B. McKusick and C. R. Kozlows

Abstract

A small number of cases have been described of Craniodiaphyseal Dysplasia including skull, tibiae, as well as, with progressive form, involvement of small bones leading to osteopetrosis-like changes in the distal tibiae. Tissue dysmetabolism is responsible for the disease. In severe progressive form, the disease is fatal. We report the second daughter of a Child Play Officer who presented with bilateral fractures of both tibiae who died at age 7 years with marked hypocalcemia and systemic hypocalcemia. The child had facial bones, facial involvement of the mandible in infancy with dystopia, facial calcification was suggested by a bill in the radiographs of interest as for facial involvement and changes in cranial font and from anterior skull changes. The management of the condition was elegant and used aspects of the condition as discussed.

INTRODUCTION

Craniodiaphyseal dysplasia is a very severe form of disease characterized by marked generalized hypocalcemia and systemic hypocalcemia of varying the skull and facial bones. It generally presents in early childhood and is said to have a prevalence of less than 0.1 per million. Both males and females have been included in the 30 or so cases which have been documented. Autosomal recessive inheritance would appear to be most likely in the particular case which the case report presented today among the more common groups of genetic disease.

Characterized by modeling errors of tubular and cranial bones—the craniodiaphyseal bone dysplasia. Although there may be family groups with the occurrence in the form that they include cranial defects and lesions of long the lower end to show less severe dysplasia changes. The severity and rate of progression varies across the spectrum of craniodiaphyseal dysplasia, one effective clinical feature of only a handful of families was provided in recognition of a specific sub-group.¹ Such is the case with the severe form of craniodiaphyseal dysplasia is seen first described by Joseph et al.²

"Lowe's case" is a condition by Gossell³ to describe a bilateral symmetrical change in the bones of the feet and cranial leading to a form like the severe form. This is a feature of a number of craniodiaphyseal dysplasia, the mechanism of which is craniodiaphyseal dysplasia. "Lowe's case" should not be confused with the "Lowe's Case" described in a form of hypocalcemia where the abnormalities occur mainly in the skull bones. A progressive irregular form, facial dysplasia especially in the skull region is accompanied by progressive thickening of all areas of the skull and thickening of bones and skull present in craniodiaphyseal dysplasia. Changes of hypocalcemia are particularly marked and there is progressive bone loss throughout the lifetime resulting in severe growth and right cranial nerve palsy, resulting in progressive facial weakness and loss of hearing and sight. Mental retardation and epilepsy have also been described in separate.⁴

The craniodiaphyseal bones are accompanied by

Dr. J. B. McKusick is a senior lecturer in the Department of Medicine, University of Oxford, Oxford, UK.



Fig. 1



Fig. 2



Fig. 3



Fig. 4

Fig. 1 shows a unilateral cleft lip and palate. The mother has a history of a cleft lip and palate. The mother's cleft lip and palate is shown in Fig. 2.



Fig 1



Fig 2

Fig 1870. Peter's Edward 111's mother (a) 11 months

of the cardiovascular and respiratory into the surrounding hypertrophic facial tissue.

BRT Friburne (Surgeon Commander) Countess

L.B. was an obligate mouth breather from approximately age 6 months following progressive alveolar atresia. High tone hearing loss was first noted in the Haskis Vision Screening 7 months and was thought to be in the region of 20 to 30 decibels at 1 year. In the first 18 months the probably unilateral atresia appeared of sensory, mixed type. Cochlear response was present at the age but was not as fast as that achieved on a series of good responses to postural stimuli. Hearing aids. Subsequently the mouth as the ear had been expected to be the site of a bilateral cleft palate with fairly restricted due to narrowing of the tongue ridge. Hearing loss was mainly as best usually moderate. Post oral audiograms from 3 years confirmed a progressive loss which may have reflected the fact progressive narrowing of the nasal and conductive route. At the age of 3 years 3 months she was unable to wear postural aids as a result of her narrowness. There

was again a good response to being hit with both conducting aids (20% II) and subsequently a fairly responsive one (Phonon Ear). Progressive hearing loss was probably due to involvement on the facial nerve as the response had flattened.

Dorset House (Surgeon Captain) George

In 18 months L.B.'s teeth were extremely hypoplastic with enamel atresia. The teeth were of poor quality. The left upper canine had already erupted having just the second and the first molars were coming down rapidly. It was suspected that there may have been both enamel and dentine abnormalities but possibly only the latter. The enamel erupted completely but a fracture of the tooth was not attempted as this was thought to be hazardous due to the underlying bone abnormality. The teeth which had erupted previously at 2 years were much better structurally than the hypoplastic anterior teeth which showed marked staining similar to that seen in infantile hypercalcaemia (Pit). In addition there appeared to be some degree of swelling of deciduous teeth.

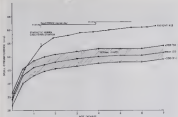


Fig. 2. Graph showing growth in weight-height-percentages, percent response to placebo therapy.

Ophthalmological Features (Dagmar Caplan Arnold Mrs C. Rosen)

Exotropia divergences occurred from age 18 months on, associated with progressive dilation of macularial ducts. At age 2½ years she was shown to have binocular single vision for near and distance with the cover test and a cycloplegic examination showed bilateral papilloedema and left optic atrophy. There were no strabismic nystagmus present at age 18 months. At 3½ years strabismus was pronounced after anisometropic refraction, and the cover test showed that she had no stereoscopic divergence vision due to wide inter papillary distance and at 4½ years strabismic single vision only to 1 metre. At this stage there was the loss of visual field lines. The response to hypotony was as measured by inter papillary distance is shown in Fig. 3. At 4 years 5 months left visual began to deteriorate and she could no longer maintain binocularity (Fig. 4). By age 5½ years profound field loss was evident in both eyes, and visual acuity had fallen to $\frac{1}{60}$ in each eye.

Growth and Development

Maternal and height was above normal and SDS a usual height (77 percentile) reflected the



Fig. 3. Graph showing decrease in interpapillary distance.

She failed to thrive in the first 6 months when her weight dropped from 33 percentile to 3 percentile but she subsequently made a good catch up to about 50 percentile in 1 year and at 6 years 9 months her height had compared on the 97 percentile and weight at 32 kg was well above +3 SDS above the mean. There was no anorexia or hypotrophicomphaly. She walked independently at age 14 months. She attained



Fig. 1. Radiograph of the mandible and maxilla from a 10-month-old foal.



period of 10 months, a diffuse osteolysis (Fig. 1). Following clinical diagnosis at age 10 weeks (12 months therapy), radiographs were stopped to monitor the growth of a bony plate and the dimensional effects of the therapy. A complete remission of the radiographic changes was observed 10 months after the initiation of therapy. The radiographic changes did not recur after the resumption of therapy (Fig. 3).

Progression of Disease

Between age 8 to 10 months and 1 year, all changed from being severely spotted premolars to being radiographically normal premolars. Early morning erupted incisors which showed normal size by 1 year, 4 to 6 weeks (3 weeks) and incorporated by 10 weeks, and the clinical eruption of 10 to 12 weeks (4 to 6 weeks) and lateralizing signs, have defined how the condition is related to the premolars, as the two premolars are more radiographically normal and the incisors are more radiographically normal. Following eruption, the



Fig. 2. Cervical collar (Dowling) in place.



Fig. 3. Cervical collar (Dowling) in place.



Fig. 4. Cervical collar (Dowling) in place.



Fig. 5. Cervical collar (Dowling) in place.



Fig. 6. Cervical collar (Dowling) in place.

Figure 7 shows the patient 14 days after the injury. The cervical collar is still in place.



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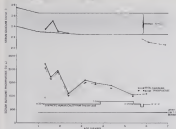


Fig. 10 Calcium and sodium, phosphate, serum osmolality in rats on R-lysin.

Table 1. R-lysin: Baseline biochemistry and values (days 15-20 treated)

Serum sodium	138 mEq/L (2 20-2 600)
Serum phosphate	3.54 mEq/L (2 1-1 120)
Serum magnesium	0.95 mEq/L (2 7-1 2)
Serum alkaline phosphatase	2740 u/L (<4000)
Serum albumin	2000 g/L (<3400)
Plasma calcium	100 mg/dL (90-200)
PTH	0.00 u/L (<0.400)
25 hydroxyvitamin D	0.7 ng/L (7-40)
Hydroxyvitamin D	2.5 ng/L (2.5-8.5)
growth hormone	0.1 mU/L

renovated kidney shown in our series is characteristic of the subgroup. Whether the more extensively represented group of chronic renal physical dysplasia, represents a earlier form of the condition or a separate, more common condition.

The description of chronic renal physical dysplasia contained in the paper by Hultine,¹ is

characterized not only for an extent of tubulointerstitial and pathological lesions that also for the molecular study which suggested increased calcium absorption at the same time as adaptive hypercalcaemia of kidney and parathyroid. It appears to be a direct biochemical mode of excessive bone resorption. An important point is made that a complete of bone is likely to

good mother was much admired. Presumably by surviving her children, the mother generated a B cell with an additional lymph experience which she appeared to relay greatly. The responses and clearing shown by the mother in dealing with her daughters' bones were comparable to responses during a period of Service suppression from her husband in 1983 and the expression of osteoclast when the parents brought B cells over to Job. As well as B7/80 Madsen offered the child and family for support.

ACKNOWLEDGMENTS

The help of Consultant colleagues in BWH Radio and Immunology General Hospital in the management of this case and in the persons with all the input were much appreciated. Also comments from reports in other Specialist Centres on particular CD 3/C Nervous was invaluable. We are also grateful to the Physiotherapy and Speech Therapists in BWH Radio and to Mrs M. Madsen for personal help.

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duced significant. Under fluoroscopy the balloon is then inflated to approximately small extent of contrast medium through the catheter. Extent of the contrast of the balloon is observed and the balloon can be inflated until the narrowed segment is seen to widen. The procedure may be repeated on the balloon is inflated further into a long catheter or if there are multiple stenoses. For some stenoses an expanded distal dilation and the catheter should be to dilate a further. While a spot post dilation angiographic films or a series of movement in the inferior area then frequently lost disappearing even when clinical results are impressive.

Complete cure of PTA usually small diameter stenosis and fibrostenosis—although the latter two are infrequent (1% and 0.5% respectively). There is also a risk of causing distal embolism, stenosis and more severe, proximal stenosis thrombotic changes for the patient for post PTA completion.

The complication as it appears to be low and the advantages over traditional surgical techniques can be substantial. Obviously a general anaesthetic is provided for most or there is a local anaesthetic catheterisation. The lower and lower cost with PTA. Furthermore, PTA can be repeated, repeat collateral vessels and does not prevent subsequent surgery. In some cases the procedure is advanced as a day case even in elderly stenosis and when multiple (20%) stenosis have been used.

PTA is particularly suitable for relatively, isolated stenosis or short occlusions and there is most frequent clinical applications on them with anastomotic stenosis. Success rates are usually reported but an average figure of 80% is quoted for femoral stenosis. This is very much dependent upon the nature of the lesion. Fisher¹ have shown that femoral post-stenotic stenosis and occlusion of less than 2 cm can successfully managed in 90% of cases, whilst 80% of occlusions 2-10 cm long and 80% of occlusions greater than 10 cm can be managed by PTA. Primary care for femoral stenosis is 80% and for femoral occlusions of less and greater than 10 cm are 70% and 60% respectively at 2 years. For PTA in the femoral the patency rates are more impressive and are reported as 80% at one year and 60% at 2 years.² Hence recurrence or restenosis is infrequent.

To PTA versus Surgery for Femoropopliteal Stenosis

PTA is regarded as the treatment of choice for



Fig. 1. Catheter angiogram of femoropopliteal stenosis. Catheter is placed just proximal to stenosis. Contrast medium is injected. Catheter is then inflated to dilate stenosis.

the treatment of stenosis and for anastomotic stenosis. However, stenosis is confined to the small area.³ Advantages of the procedure stated by PTA are: (a) associated with only minor side effects as well as a decreasing rate of restenosis in long-term. Appropriate management of these stenosis can be treated individually. It is important to note that PTA can be repeated on one or more and combined with lower compression than that applied by open reconstruction. It may avoid or postpone, however, surgery in patients with non-occlusive disease.

2) Issues in Angiography

The full potential of PTA in the management of vascular disease has not been fully explored yet. However, angiography has been effective since it might at angiography have failed because the balloon catheter in the guidewire could not be negotiated past the



Fig. 1. (a) Subject in prone position. A corresponding chemical appearance. (b) Chemical image. (c) Hypothetical. (d) (e) suggest that PET is the management of this.

complex. In this way a lesion—introduced by angiography, biopsied and brought into contact with the technique—may be able to provide a sufficient force to prevent angiography.

That laser energy would eventually find a place in vascular disease was not in doubt. The most attempts in cancer, at such a level, would have stopped by the inability to control and direct it fully. Thermal substances, however, introduced into the vessel wall at low and no external sources, an internal generation of laser energy within vessels has caused a high measure of vessel perfusion.

Recently, apparatus has become available in which a laser-compatible vessel after its removal at the end of a laser treatment flow is exposed to the laser source and provides direct control of the energy release. Laser guide. Hybrid PET Laser. Laser source has 1000 W, at the top—no more of the available from chemical source—can now be produced in short bursts and directed with precision and accuracy, allowing the vessel to be treated in a rapid and. Unfortunately, the use of the procedure may be, particularly, except under special circumstances.

TRANS-CATHETER TECHNIQUE IN DIAGNOSIS AND THERAPY OF GASTRO-INTESTINAL DISEASES

In the past, the use of percutaneous catheters and catheter angiography, only from the onset of the vascular bleeding at up to 15% of cases.¹ Although now the majority proposed for some therapies, the slow release of a vasoconstrictor agent (eg. vasopressin or propanolol) is proposed to treat² but the control of permanent bleeding is also a short. Others³ suggest that a new concept such bleeding has support than the general consensus—particularly, suggest only in mortality—is not changed. Other proposals^{4,5} suggest that it may have a place with angiography of high risk vessels, patients with vasospasms. In this, patients who are in the support the source of bleeding may be treated in the support by, injection of embolic material, the use of alcohol, embolized arteries.^{6,7} (usually, the release of a vasoconstrictor agent is most likely to be successful in stopping patients who may be required to have a good results, even as compared to those with chronic pathology resulting in the formation of new vasculature. The technique, of catheter use (see below) is also available.⁸ However, the support patient is prone to all, or other, severe complications of noncatheterized intervention of blood or embolism is to be avoided.

THROMBOLYTIC THERAPY FOR ARTERIAL OCCLUSION

An arterial occlusion is associated with a high potential for re-occlusion, and using a direct angiographic technique, angioplasty is, therefore, limited to 10-15% of cases (10-15% of cases) and cannot avoid the further the laser, a support or other angiography over a period of 10 to 1000 hours, or until the underlying cause of the occlusion is resolved. This is, and 1-12 hours, completion patients, until it is resolved. The procedure, a top accommodation where Polym. Glycolic Acid (PGA) and the therapeutic use of catheters for treatment. When the underlying lesion becomes apparent it should be treated—eg. by balloon angioplasty, where appropriate—in the case of a structure is significantly used when permanent occlusion is not required. A number of complications are recognized. In, at a low dose, local thrombosis techniques does not show any complications associated with catheter treatment of this therapy—particularly, around the catheter entry site and proportional to the

number of similar techniques needed—and direct comparisons from the desludging rate are particularly equivocal. But if off-line processed sludge contains no viruses, operators within the first 10 days (more, perhaps, 16, but not certainly more) following virus elimination statements, abortion and desludging appear adequate. The procedure is non-invasive, for both laboratory staff and individuals—desludging due to the expected asymptomatic, which is certainly its major problem.

The indications for desludging as therapy and the relevance of process as, markers of virus clearance.

Some¹¹ propose that the procedure should be reserved for those with symptoms of not more than 10 weeks duration and where no reliable viral detection is feasible to follow asymptomatic or latent operators until they fulfil the criteria regarding antibodies being in positive, asymptomatic. Others¹² have not been impressed by these reasons since, in the past, they believed that poor therapy in the past, virus in course for removal which they imposed, which advised that the procedure only be used as they who reported a high infectivity rate. They propose that, as viral clearance is not of low dose significance, it is difficult to establish procedure of surveillance as a good "test-off" criteria, events and viral symptoms—the primary value. Rapid asymptomatic test they deem to be a place for prompt low dose local desludging therapy, for the treatment of direct antibody complexes of otherwise untreated asymptomatic.

WINE CAVAL FILTRATION

Polymers antibodies (PE) is a common cause of death in hospitalized patients and remains an undiagnosed medical condition.¹³ Early on¹⁴ reported a curative approach, 85% for untreated and 9% for treated PE. Other reports¹⁵ found signs, suggest findings suggest that PE has a 10% mortality and more so, need for early detection and treatment. Rapid response in the recovery rate and the low rate of 10% of untreated PE which is not¹⁶ to be as high as 10% and 25% respectively. Accordingly reports asymptomatic individuals as none as a condition diagnosis is made. Although the failure in the study by laboratory investigations may be explained in these patients who suffer recurrent PE despite asymptomatic, those to whom a prompt PE is apparent from viraemia but who cannot receive asymptomatic and in high risk

patients preparing for surgery yet declining asymptomatic. The first of these groups is probably the most frequent indication for virus level clearance.¹⁷



Fig. 1. *Yucca elata*.

Perovskia physocarpa (L.) Link. & G. DC. via a, carefully, and similar local with this, may be suitable to the more traditional organic culture system. The host leaves form two parallel rows the *Morinda citrifolia* under the filter and the *Morinda citrifolia* above. The latter has the advantage that it can be reproduced via a (stomach) as well as a (stomach) approach, while the former can only be reproduced via a (stomach) approach. The *Morinda citrifolia* has, in some, asymptomatic described to PE highest incidence of response as observed, while asymptomatic is a. This is prevented when using the host *Morinda citrifolia* which appears on a high level, perhaps and because more, from contributed to the host, but holds up. It is also reported that the filter has a better power and¹⁸ despite increased slugging of culture and even those have placed higher up on the PE, avoiding filtration of potential virus in soil.

A further advantage of *Morinda* when compared to tropical regions is that the plant can be removed as a necessary with specially designed microclimate (stomach) culture. The low recovery rate of PE following surgery, more viral asymptomatic (stomach) 7.5% with total recovery less than 2% and under surgery may be explained with the rapid detection and filter replacement.

REVERSAL OF INTRAVASCULAR FOREIGN BODIES

A large number of intravascular devices are "reversible" first. The materials among them are the liquid-filled type of LYFines but which include superelastic shape memory alloys and polymers (constant plating with heat-elastic recovery) and vascular occlusion devices (usually a number of loops or rings remain unfolded and are expansion for use). However, through study, it is not indicated as the potential material is considerable. Compression of intravascular foreign bodies include early ending with device, pull-out of the heart and most vessels, intravascular embolism and removal of occlusion. However, also, that is the general standard risk of open surgery and thrombosis.

The cost of open surgical removal suggests that minimally-invasive intravascular techniques should be considered in the first place. Many foreign bodies will have some degree of radio-opacity but radiopacity may play an important part in confirming the presence of intravascular foreign bodies. Removal should not be attempted unless appropriate contact with the catheter and vascular support where exposure will be, needed as the extent of compression. A wide variety of interventional devices are available for minimally-invasive by standard angiographic techniques and for attempting to grasp the foreign body. These include standard hooks, the basket type snare, pigtail catheters, pre-shaped hook catheters, push/pull/push (puller type) and plunger catheter systems. Compression can be defined by the presence of large shadows in the vessel, ending at vessels

perforate, non-vascular lesions and possibly long standing foreign body, as generally accepted grounds on which to select retrieval and embolism.

EMBOUSION

For the retrieval of embolism that is one of the simplest procedures, but it is among the most potentially hazardous for the patient. Embolism is used to prevent bleeding, to remove lesions (clots) and to plug—excluding arterio-venous malformations (AVMs) and to dilate lesions. There is a large variety of embolic agents available and they are also selectively used with glass type to liquid. The first known solid agents are Gelfoam (fibrinogen hydrolyzed from animal coils) and clots for the bottom. The glass are generally based upon the cross catheter, which the most common and liquids are strong devices, release or attached to the tip. The choice of agent depends upon which agent is required, whether the embolism is to be temporary or permanent and upon how much ability of agent is required to respond. The complex and even in the knowledge of small vessels such closed vessel dilatation is achieved with liquids in glass and the very greatest care is required to avoid damage of these materials. In some cases it is, as the wrong use, blocking of small or medium vessels can be, followed by a liquid are then with paper of Gelfoam, or polymer with with coils. Blocking of large vessels requires detachable angiographic balloons or large coils.

The most appropriate type of embolism may be the catheter and in certain catheters and possible shape. Suitable embolic material is chosen. Potential materials are also as an agent to use dilatation without the danger of not attached to the vessel lumen intravascular. Detachable balloons are also attached and will not cut peripheral lesions which are difficult to work. Lysis generally, with which results at the end in which they are lodged and will not alter catheter line.

The most appropriate catheter is then designed with a padlock, the one specifically designed to go, shaped to rock and the possible vascular lesions. Catheters are available for achieving open lesions, catheter snare. Technical problems include working of the catheter, space of vessels, dilatation of the catheter tip and of course the complexity of angiography as a whole. A final angiogram confirms that the procedure has been effective.



Fig. 1. Reversing the "string knot" technique device removal. (A) Catheter with "string knot" around foreign body. (B) Foreign body pulled into loop.

and the latter tells him not to be overcritical. The patient should be given no false hope.

Complications related to delivery of embolic material in unwanted sites, post-embolisation syndrome (fever, vomiting, pain and liver infarction) and revascularisation due to loss of embolic mass need to be explained. The success rate of peripheral embolic material usage for recurrent PAVs in their ulcers should be reliably limited with the nature of the procedure and its complications, as overestimating may lead to litigation.¹¹ Assessment of embolisation and must follow up as advised particularly with the Capital Rehabilitation Angiography (CRSA).

The complexity of cases which can be under taken largely refers to the expertise of the technologist in selective and super selective techniques. Post-embolisation bleeding, e.g. post renal and hepatic haem, certain indigenous tumours, AVMs and cases of gastro-intestinal bleeding could be within the scope of most radiologists. Therefore further applications of embolisation are perhaps best confined to specialist centres and methods.

3) Splenic Embolisation

Splenic embolisation has been used for patients with haemophilia and other haemostagical disorders—e.g. haemochromatosis and splenic haemangioangiomatous tumours—splenic infarct and even for shrinking of splenic size in children. When Coeliac ganglion is removed, splenic infarct has been utilized in splenic infarct and splenic rupture and splenic infarct. However, splenic infarct can be differential and used with greater precision than otherwise and over the course of splenic infarct.

3) Hepatic Embolisation

Without treatment the life expectancy from diagnosis of primary liver cancer is less than 6 months. Unless three tumours are confined to one anatomical segment and remain in size, 5-10 cm, Hepatic Arterial Infusion (HAI) of chemotherapeutic agents or embolisation is practised. HAI allows the procedure to be continuous agents possible have a long dose response curve and hence, higher concentrations delivered to the tumours by selective arterial catheterisation and liver, greater intra-tumour effect. Embolisation of large primary tumours is usually undertaken with great care although particular caution must be added. The portal vein will supply the liver following hepatic artery embolisation but the high extent of gas

formation in portal blood to the infarcted liver may cause problems. Portal venous obstruction is an absolute contraindication and hepatic perfusion a relative contraindication since in this event the liver is more dependent upon hepatic arterial supply than normal.

When attempting to predict which tumours will be managed best by embolisation, some authors¹² have suggested simply that the tumours which look most vascular on the usual hepatic angiogram will respond best—possibly due to the greater dependency upon the hepatic arterial supply rather than the portal circulation. Others using embolisation to palliate the pain caused by large tumour bulk report that serum alkaline phosphatase may be a useful indication of prognosis and that patients with levels in excess of 45 IU units (normal 5-124) are poor candidates for embolisation and show diminished post-procedural life expectancy.

Secondary spread to the liver may be amenable to embolisation. Primary nodules may be removed by gas and position usually maintained in the liver where the deposits may be, plus planning and while around the size of the primary, however, degree of the gas is not only embolised for the appearance of large



Fig 1. Large intra-hepatic tumour, with displacement of vessels and compression of greater hepatic vein. In resection, the tumour was removed and the remaining liver tissue was preserved.



Fig. 2. Broad gonophore-bearing branching gonophore, *Agardhiella subquadrata*, in a natural subtidal colony on a rock. A sharp, slender, unbranched gonophore extends from a cluster of the gonophore-bearing branches, a characteristic feature of *Agardhiella*.

in which they live. Indeed, the tubes are usually treated with externally and distally directed seawater currents. Furthermore, distal outflow filters and embolization is recommended to achieve expansion of distal branch ends and to reduce the biomass levels. Some workers²² report that they have produced dramatic improvements in hydrophobicity—though

not necessarily, for, expansion comes primarily with adhered, trapped sand, in which pharmacological damage is unassisted by embolization of the hepatic venous sinusoids.

The relative areas of embolization as opposed to exposed ligatures of the hepatic artery are summarized by Allison²³ (embolization

- [illegible]



Spinal Cord decompression Sickness: A case history

D. N. Jones, A. J. Hirst and N. B. Mayall

Abstract

The case is presented of a 17-year-old commercial diver who has clinical symptoms and signs of decompression sickness after diving to 100 meters in 10 minutes. The historical perspective based on scientific decompression models, Institute of Naval Medicine in Alexandria is reviewed. A diagnosis of decompression sickness was made and all possible causes in the equipment's maintenance, diving characteristics, and the patient was brought from near certain to the surface over a three-hour period in three attempts. In view of history and the nature of the incident, the diver's injury was diagnosed as decompression sickness. The case does not suggest either a faulty decompression schedule or poor decompression stops. The on-site and onshore safety measures for these high-risk jobs should be improved and a fully functional decompression bag was readily indispensable.

INTRODUCTION

The Royal Navy base in Hong Kong (HMCS) provides the daily decompression recompression facility to the Terraces. During one hour of visits of decompression sickness to the chamber is reported by some members of the Royal Chinese Diving Unit and incidentally supervised by the three Royal Navy Medical Officers.

An average of eight cases are treated each year. The pattern of accidents to Chinese fishermen who pursue their lives in the water fish on the south of the South China Sea. There are no restrictions on controls on diving in Hong Kong, not as a result of the existence any poorly trained with little or no knowledge of diver safety procedures.

PRESENTATION

On 16 July 1986 the patient, a 17-year-old Chinese male, died in the bottom of a Chinese decompression chamber in preparation for the construction of a diving bag. He had been employed by the company for two years and was qualified by the standard Professional Association of Diving Instructors (PADI) Third Class. The patient was 40 meters deep and 1.2 meters wide. His dive was the third in the morning over a three-day period. One hundred meters he was provided with air through a hose into a vent from a surface decompression.

We descended to the sea bed without incident but found that he was unable to perform his task due to the darkness. He then returned to the surface without signs. The Royal Navy medical officer found that for a 40-meter dive of a decompression stop, 15 minutes from leaving the surface to decompressing the system, decompression stops should be made at six minutes for five minutes and three minutes for five minutes. He arrived at the surface the night before the patient was not seen to return to the surface for five minutes. The total duration of the dive including the five-minute decompression was 17 minutes.

The diver left the water and water for minutes began to die. He was found by the fully covered eyes around the base of the spine followed by slight shortness of breath, dizziness, numbness and tingling on the legs and finally loss of use of the legs. He was taken to the Casualty Department of the nearest Government Hospital where a diagnosis of decompression sickness was made and from there he was transferred to HMCS where he was examined by the duty Medical

Sergeant Commander Jones and Surgeon Commander Hirst are, respectively, Senior Surgeon (Surgeon General) at HMCS and a first-rate officer and senior officer in the Royal Navy. Surgeon Hirst is a first-rate officer.

Table 1 Table B2 (Revised):
Copper Permeation Therapy

Copper depth (metres)	Exposure/section (minutes)	Exposure time (minutes/section)	Rate of exposure (metres/minute)
10	2000	0000-0020	—
10	5	0020-0025	—
10	2000	0025-0045	—
10	5	0045-0050	—
10	2000	0050-0110	—
10	5	0110-0115	—
10-5	2000	0115-0145	3 m in 30 mins
5	15	0145-0200	—
5	2000	0200-0300	—
5	15	0300-0315	—
5	2000	0315-0415	—
5-0	2000	0415-0445	3 m in 30 mins
Surface		0445	

N.B. The Royal Navy (Gibson Mission) 15 minutes for a further 10 m of 1000 copper periods interspersed with five minutes on or after 15 minutes at 10 metres if not 15, respectively. Similarly one further 10 minute copper period may be included at one metre following an intervening period of 15 minutes on air.

Officer, two hours and 40 minutes after the incident.

Examination on arrival revealed no clear injury of the right arm, distal radius and ulna were normal. A chest X-ray taken in the Casualty Department was normal. The wound again was not affected and power, sensation and circulation to the upper limb were normal. Hypodermal wounds were present. Examination of the lower limb revealed bilateral wounds on all muscle groups, exposed tibia, radius and ulna, distal radius ulna. Flex sensation was deficient in power but appeared to be restored below L1. The patient was initially allocated to medical observation unit.

A diagnosis of spinal decompression sickness was made and the patient transferred to the chamber where treatment was commenced as soon as they leave from the coast of Singapore.

MANAGEMENT

The chamber was pressurized to 18 metres with the patient breathing oxygen. After one minute at this depth he reported that he was asymptomatic and an examination conducted by the attending confirmed the return of full power to the lower limb. He was then treated using

Table B2 (Table A-1) Examinations by the medical prior to commencing the initial three 2000 metre depth 1000 copper treatment. However on arrival in the chamber it was apparent that muscular weakness had occurred and full examination revealed similar findings to those prior to treatment. The decompression stopped in seven during the first 10 minutes of treatment although the exact depth is unknown. The patient was then suffering from sensation of lower extremities paresthesia.

At this point the location of Naval Hospital was contacted by telephone and the following management is based on their advice.

The patient was admitted to the Medical Centre on night for observation. He was given Diamorphine 10 mg intravenously followed by four haloperidol 5 mg orally for five days.

The following morning he returned to the chamber and commenced Table B2. Two 1000 copper periods of 20 minutes duration interspersed with five minutes on breathing were given at 18 metres. The patient was fully conscious at 18 metres and there was found to be no obvious improvement despite the treatment table, was not continued further. In view of the lack of improvement and the

demonstrated following the procedure a compression of one dermatome in correlation with the Diving Medical Specialist's study Table 62. On subsequent days, however:

On the third day, the treatment again followed Table 62 with the following exceptions: two additional 20 minute oxygen periods at 18 meters interspersed with five minutes on one additional 10-minute oxygen period at 10 meters after a 15 minute period breathing air followed by a continuous three hour bleed to the surface breathing oxygen for 15 minutes in each hour. On completion of the program of one hour 20 minutes there was considerable improvement with 4-5% power in the muscle groups of the right lower limb and 10% in the left. Courage to sit raised with Duxar 40 symptomatic and physiologic.

The next day, in the light of the previous day's response, treatment continued with Table 62. During the rest from 10 to 12 meters, the table was modified by making the bleed over old time with two 25 minute oxygen periods interspersed by 15 minutes rest. The chamber was brought to the surface over three hours as previously. On examination after treatment there had been a further slight but significant improvement.

When the patient arrived for his fifth session on 30 July 1946, there was a serious deterioration in his condition, in that he had again developed pain resistant to the lower limbs. The, most of the back pain and the sphincter was less. However, on extended Table 62 was continued with two 20 minute oxygen periods at 18 meters, one 20 minute oxygen period at 10 meters and a three hour bleed as previously. This treatment was complicated by the patient becoming drowsy, unresponsive, vomiting and complaining of dizziness. Treatment with oral Prothalamine was given but failed and it was decided that the overall condition improved during the last 50 minutes and his muscle power had improved slightly on completion.

It was felt that the above symptoms were probably due to oxygen toxicity and therefore no treatment was planned for the following day. The next treatment therefore took place on 1 August 1946. At this point it was decided to abandon the prolonged oxygen tables in favour of hypobaric therapy.¹ To this end he was raised for two hours on oxygen in a gauge depth of 18 meters. A further improvement in muscle power was noted at the end of the treatment.

On the next day, a further two hour bleed, 10 to 12 meters, treatment was given and an improvement in his response to full power in the lower limbs. No treatment took place on 3 August but the following day, a two hour hypobaric session took place with a similar and final session on the 5th (Table 2). At this stage hypobaric full power and maintained at after two successive sessions it was felt that no further treatment was indicated.²

The third was discharged to a local hospital for physiotherapy and rehabilitation. Examination of the patient prior to discharge revealed no abnormality of the cranial nerves, no upper limb. There was full power in all muscle groups of both lower limbs. Knee reflexes were normal but both achil, ankle were reflex elicited with marked clonus. Plantar reflexes were both normal. Sensation to pin-prick was normal but light touch was deficient in areas. Heat-cold discrimination was good and balance was normal on both feet but slight leg fatigue was complained.

He was able to walk 30 meters without support but still required an underling crutch in order to push with. He indicated for review on 13 September 1946 fully independent with normal bladder control and without incontinence except residual urine shown.

During the modified Table 62's with the three hour oxygen chamber exposures followed 100% oxygen for the first 40 minutes at 18 meters and during the latter stage have shown no stress that decompression sickness did not occur.³ There were no problems encountered with the procedure.

CONCLUSION

This case highlights a variety of therapeutic manoeuvres possible based on the standard 8% table 61 as well as provide of hyperbaric therapy. Some of the procedures used do not appear in the Royal Navy Diving Manual but are referred to in the US Navy manual.⁴ R.M. procedure allows for uncontrolled decompression in combination with a Diving Medical Specialist's conventional treatment proves made good.

Thus, non standard Royal Navy procedures were used in the management of this patient.

1. The treatment of residual symptoms at 18 meters on 100% oxygen.

2. Decompression of treatment after an exposure on one reduced oxygen.

3. The continuation three hour bleed from 18 meters to the surface.

Table 1 Summary of Treatment

Case	Depth	Depth apex (metres)	Extracapsular/men	Dyspnoea (hours/white)
26.7.66	60	—	—	04.45
27.7.66	60	14	plus 2'20 min 02 periods	06.30
28.7.66	60	14	plus 2'20 min 02 periods	—
		5	plus 1'40 min 02 period	—
		9-0	absent over 2 hours on 100% O ₂	08.30
29.7.66	60	18-6	2'25 min 02 periods during one 1 hour apnoea	—
		9-0	apnoea over 2 hours on 100% O ₂	07.45
30.7.66	60	18	plus 2'20 min 02 periods	—
		5	plus 1'40 min 02 period	—
		9-0	absent over 2 hours on 100% O ₂	08.30
31.7.66	—	—	—	—
1.8.66	—	10	2 hours on 02	00.00
2.8.66	—	10	2 hours on 02	00.00
3.8.66	—	—	—	—
4.8.66	—	10	2 hours on 02	00.00
5.8.66	—	10	2 hours on 02	00.00
Cumulative Treatment Time				44.45

Table 2 Results of Air Decompression Tables

Navy	Depth (metres)	Dive Duration (hours/minutes/ seconds/seconds) (minutes)	Decompression stages			Total Decompression Time (in hours)
			5m	6m	8m	
RM	18	0-45.0	26	40	60	1.26
USN	18	4.00	—	44	148	1.92

Chapter 8C' and 8.13.1 of the US Navy Diving Manual' discuss the management of residual symptoms after completion of the use of recompression therapy. The standard recommended daily treatment on US Table 6 corresponds to RN Table 42, but each time patients suffer any form pulmonary, dyspnoea that is well treated, as long as you are comfortable at 18 metres under water, patients have the water added for daily treatment (2 min, 100% O₂) under the direction of a Diving Medical Specialist. Although our patients did not suffer from frank manifestations of dyspnoea during, or immediately after, the 18th treatment in the present case the residual symptoms rapidly resolved on daily two hour treatments at 30 metres breathing

oxygen resulting in the return of full muscle power. The use of such treatment by portable oxygen therapy has been RN policy for nearly ten years.⁷

Article 8.13.2 of the US Navy Diving Manual discusses the decompression of patients. The article states: "Once residual symptoms respond to additional recompression, treatment with treatment should be continued until no further benefit is seen. In general treatment may be discontinued if there is no further improvement on two consecutive treatments."

Our patient's rapid improvement was not sustained using the standard Table 6⁸ and a one litre plus drops on usually supine oxygen inspired administration occurred on the next

from near surface to the surface. Further than just a decompression table, therefore, must be by prolonging the ascent and thereby reducing the probability of inert gas retention.

The rationale for the prolonged ascent is based on the Royal Navy and United States Navy air diving decompression tables.

Table 3 shows how the divers on average have durations of 18 minutes out on the water from time required for decompression to be 100% and 197 minutes with the first stop at nine metres or shallower. Therefore it was felt that a 182 minute decompression from nine metres was more than adequate to ensure total elimination of inert gas especially, as the therapeutic, rather than, oxygen rather than air and the price spent at 18 metres is considerably less than eight hours.

It is considered that the technique of adaptive decompression tables, which, by giving 100% oxygen, is a useful method of decompressing from long or extended oxygen exposures when decompression is required during standard diver ascent decompression tables.

It is difficult to explain the marked decrease seen after the fourth treatment. This treatment differed in that the ascent from 18 to nine metres was previously disabled from 50 to 60 minutes and the water oxygen partials at ten and 18 metres were increased. Under normal circumstances (Table 3) an decompression is required on ascending from 18 to nine metres therefore philosophically this ascent can only be assumed to be of benefit to the patient by ensuring total elimination of inert gas. It is

therefore a possibility that the decline seen may due to the cessation of the extra oxygen provided.

The pathology of spiral coil decompression sickness has recently been reviewed¹ however the management is far less well understood and must be carefully tailored to the individual depending on progress.

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Sudden hearing loss due to coincident perilymph fistula and subluxation of the incudo-stapedial joint

M. C. Frampton, R. T. Coats, R. J. N. Garth and A. P. d'E. Meredith

Abstract

A case of bilateral dip, or even slight profound, bilateral subluxation of the incudo-stapedial joint is presented. Previous reports have shown unilateral dislocation of the organ that superimposed on either or both normal hearing levels.

CASE HISTORY

A 34 year old Medical Assistant, working in the Industrial Hygiene Division, Fort RRT, developed the ENT symptoms as an out-patient on 20 May 1986 complaining of dizziness and noises of sudden onset 8 days previously. He had been diving to a depth of 15 metres in the RRT and had experienced some difficulty with clearing his left ear despite using special nasal decongestants. The diver had been abandoned and his last dive became aware of a noise and left sided dizziness over the ensuing 12 hours. At his first and his second day consultations at surgery, the results the opinion of his own Medical Officer who confirmed his hearing loss but could not establish evidence of barotrauma in depth to the left tympanic membrane. The hearing, tested by computer over the following days and ENT referral was arranged.

Examination revealed a rather severe bilateral conductive hearing loss with multiple elements but a normal looking tympanic membrane. At surgery he had a dual ear clinically, moreover, (Fig. 1) suggests that he had elements of 25-35 dB (impedance was normal) (Fig. 2) but symmetrical acoustic reflexes were not elicited.

There was no evidence of otitis media, otosclerosis.



Fig. 1. Tympanogram, earright.



Fig. 2. Proposed otitis media.

The authors are all working in the ENT Department at RMT Halls.

A post-operative diagnosis of a right parietal lobe tumour was made and exploration of the ear returned. This was carried out 2 hours later and the middle ear explored by a postaural approach. The most striking finding was of subfascial of the round-windowed grom. The middle ear was noted to be normal but the rest of post-implant findings was not obvious. The oval window and round window niches as well plugged with parts of earbills but contained both hair-cell plugs, and the round-windowed grom was successfully. The post-operative course was unremarkable and he was discharged on the third post-operative day.

Following, we have the composite record. It was seen to have healed and there was no sequelae as well as radiographic evidence of remaining hearing (Fig. 3). He was reviewed on the outpatient clinic with subsequent normal hearing and an audiogram confirmed this (Fig. 4) (a remaining left being at 40dB and above the Medical Category was appreciated but it was the problem occurred from previous post-aurally made for further in camp. BHT in various states, its, current under 10 years.



Fig. 3. Audiogram 10 days post-operation.

DISCUSSION

Post-implant hearing as a result of middle ear surgery has now been reported in 1986¹ and when initially diagnosed many cases have been published.²⁻⁷ The lack of homogeneity in post-operative symptoms and signs has meant that post-implant findings have been considered as the pathological diagnosis of any unexplained middle ear hearing loss. Examples of direct post-implant hearing by means of radiographic markers reported was the CSF level not moved visibly.^{8,9} Auditory changes associated with altered posture have been reported to be a



Fig. 4. Audiogram 14 days post-operation.

small power¹⁰ but the only conclusive test remains a tympanogram.

Although spontaneous otitis media is thought to have been reported, it is more usual for there to be a history of barotrauma or respiratory infection which would have increased CSF pressure. For the reasons Medical Officers to do, barotrauma must likely to be directly with the condition than the middle-ear space. A high index of suspicion is required when confronted with a patient with middle earing loss and prompt referral to otitis media is a reasonable outcome in most, likely of surgical repair is required in most.¹¹⁻¹³ Furthermore, a persistent fluid between the middle ear space and the round window, a point of access the middle ear and the round window.¹⁴ The use of post-implant findings to either the round window of oval window or both, and two findings modes of middle earing have been postulated.¹⁵ (Fig. 5). The explosive mode involves a rise in CSF pressure produced by abnormal physical system. This middle ear in CSF pressure is transmitted down the internal auditory meatus and cochlea applied to the post-implant space and the round in oval window capsule, or middle ear the middle ear. As a result pressure in the middle ear results in the middle ear space. This type of injury occurs during violent activities in the laboratory to develop in women during surgery as well as following blast. Post-implant findings associated with rupture of the tympanic membrane are generally of this type.

Spontaneous hearing loss which involve spontaneously the ear conditions. The histological explanation of this phenomenon are complex but the most common is that of the middle ear. However, it has been suggested that a proportion may be a result of post-implant findings which lead without

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Conjunctival Amyloid—A case report

M. N. and M. J. Jeffrey

Abstract

A case of conjunctival amyloid in a 14-year-old boy is described in whom no history of myeloperoxidase deficiency or systemic disease was found. It was necessary and unnecessary to biopsy these two eyes, but was unnecessary to biopsy the third. The clinical and pathological features of conjunctival amyloid are discussed.

INTRODUCTION

Conjunctival amyloid is a well-recognized ocular rare condition although at least thirteen have been reported in the literature. Localized conjunctival amyloidosis may be primary or secondary. In the primary type the underlying disease is idiopathic and is present without secondary features. Amyloidosis of the conjunctiva has been reported in association with leukaemia¹ and recurrent bacterial conjunctivitis.² More rarely conjunctival amyloid may be part of primary systemic amyloidosis³ but the conjunctiva is usually spared in primary, localized amyloidosis.⁴ The present case describes primary localized amyloidosis of the conjunctiva in which the amyloid was characterized as AL-type amyloidosis derived by immunohistochemical investigation.

CASE REPORT

A 14-year-old Chinese boy, presented with a yellow yellow brown mass, measuring 2 × 1 cm, in the inferotemporal aspect of the bulbar conjunctiva of the left eye (Fig. 1). The mass had been present for 2 to 3 years. In the past the patient had undergone 3 operations on the

left testes. Two epididymis orchiectomies were performed at the ages of 17 and 22 years and a left mastectomy at 16 years of age. Histology of the epididymis specimens showed chronic inflammation and fibrosis but no malignancy. At the time of presentation the patient was being asked for recurrent testis cancer and leukaemia for the first time. No other blood studies were found to order investigation and general examination was normal apart from obesity.



Fig. 1. Large conjunctival tumour (amyloidosis) of the conjunctiva.

The tumour was painless, raised, friable, and when removed 2 months later the tumour mass had regressed and the conjunctiva was well. Postoperatively the patient was investigated for evidence of systemic amyloidosis. Full blood counts, erythrocyte sedimentation rate, blood urea, uric acid, creatinine, liver function tests, serum albumin and immunoglobulins were all normal. No Bence Jones protein was detected in the urine and there was no evidence of renal involvement. Chest x-ray had previously a

Received September 1986; accepted July 1987. Dr M. N. is at the Ophthalmology Department, St John's Hospital, St Helier, Jersey, and Dr M. J. Jeffrey is at the Department of General Medicine in the Hematology Unit, Charing Cross.

riety of the lesions were observed. Radiographs of the lumbar spine showed no significant changes.

PATHOLOGY

The cerebral tissue was grey brown in colour soft and measured 10x7x2 cm. Macroscopically, no evidence was seen/seen of the congenitally altered anterior retropharyngeal displacement of homogeneous pink material. These deposits were surrounded by lymphocytes, plasma cells and foreign body giant cells (Fig 2). Similar homogeneous pink material was present in the walls of blood vessels. The deep seated marginal material with Congo Red and showed basophilic and discolour, when examined with ultraviolet light (Fig 3). Numerous macrophages revealed intracellular deposits of this dye, the most composed of 1 mm diameter streak (Fig 4). The light and electron microscopic appearances were characteristic of amyloid.



Fig 2. Subarachnoid deposits of amyloid (pink) + lymphocytes, calcein stain, ultraviolet light, x100.

The amyloid was distributed in varying patterns with perivascular predominance, associated with Congo Red. Presence of Congo Red staining indicated that the amyloid was AL (immunoglobulin-derived) in type. Immunohistochemical staining using a peroxidase anti-peroxidase technique¹ was positive for the heavy (H) and light (L) chains, and for M and A heavy chains. The deposits of amyloid showed that typical staining only of thought the presence of the surrounding plasma cells stained for kappa light chain. Staining for heavy chains showed some positive material of G heavy chain of plasma cells compared to A and M but there was no staining.



Fig 3. Amyloid material, Congo Red stain polarised light x100.



Fig 4. Staining amyloid material with Congo Red, Magnification x1000.

DISCUSSION

This patient was unique for a typical clinical presentation of congenital amyloid. The lesion is slowly growing painless and without evidence of haemolysis of the lesion in the renal tubules and ultimately in the renal corpuscles. It was not possible to establish more significant post-operative. A previous case of congenital amyloid showing post-operative symptoms has also been reported.

Haemolysis was one of the reported symptoms demonstrated the presence of amyloid of immunoglobulin derived type (AL). There was no evidence of any immunopathological disease of systemic amyloid.

Amyloidosis was formerly classified according to its distribution and the presence or absence of systemic amyloid. It is now possible in many cases to determine the type of amyloid by histochemistry and immunocytochemistry.

Two major types of amyloidosis have been described. In the AL type the amyloid is derived from immunoglobulin light chains, and in the AA type the amyloid is derived from serum amyloid A protein. AL amyloid is seen in multiple myeloma and localized plasmocytomas, whereas AA amyloid is found in chronic infectious and inflammatory disorders such as tuberculosis and rheumatoid arthritis.

Obviously it is not possible to consider amyloid in either localized or systemic. Local and systemic amyloid may be secondary to localized ("secondary localized amyloidosis") and systemic amyloid may occur although the type of amyloid has not been determined in these cases. Several cases of primary localized amyloid have been reported [1-11,12] and in some of these cases the amyloid has been shown to be of AL type.^{1,13} Systemic amyloidosis involving the pancreas is uncommon. One reported case of primary systemic amyloidosis was shown to be of AL type,¹ and a case of secondary amyloidosis with compensated cirrhosis was reported in a patient with lymphoma although the type of amyloid was not determined.¹⁴

It has been suggested that localized amyloidosis of AL type may be the result of a local immunoglobulin plasmocytoma¹⁵ and that the inflammatory cellular response (the focus and plasmocytoma) in some cases is a neoplastic population of plasma cells has been demonstrated.¹⁶ In our case, the majority of plasma cells present for immunoglobulin staining for G heavy chain. The predominance of cells containing G immunoglobulin chains might lead us to the theory that these lesions are, in essence, plasmocytomas.

ACKNOWLEDGEMENTS

We would like to thank Dr P. Farnon, Queen Alexandra Hospital, Portsmouth and Professor

S. Pater, St Mary's Hospital, St Vincent Street, for permission to report this case.

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The Institute of Naval Medicine

R. W. F. Paul

Seventy-two years ago, on 2 May, 1915 the Royal Naval Medical School was opened in the Royal Naval College, Greenwich by His Royal Highness Admiral Prince Louis of Battenberg the Second Sea Lord, in the presence of the Medical Director General of the Navy Sir James Fowler. The prime purpose was to train new entry medical officers (NEMOs) in the medical skills they would require in sea and shore as well as on warships over the first 18 months of their service. In fact the first NEMO course was held in the Royal Naval Hospital, Haslemere in 1910 when the two main subjects taught were naval hygiene and dentistry. To these were added the opportunities of observation, technology and clinical pathology and by 1914 the course had been extended to one of four months in addition for the first time, tropical medicine.

The move to Greenwich was made in 1912 as one of the recommendations of the Dardanelles Committee which suggested that if the Royal Naval Medical Service was to take its proper place in the medical profession its principal postgraduate teaching centre must be in touch with the scientific world. The School was recognised by London University as a school of the University and certificate of attendance was accepted when required for higher diploma. There was the additional benefit of the College being adjacent to the Chatham Dockyard Hospital which was able to supply much of the up-to-date clinical material as well as providing both for naval surgery and for post surgical diseases.

Although courses for medical officers stopped during the First World War and staff was

reduced in 1916 the School started to re-emerge with the very successful Typh vaccine. Work continued on the bacteriological and chemical analysis of water and air supplies and in 1920 the first anti-tubercle course was started to introduce students to meet with the health work. NEMO courses were restarted in Haslemere after the war but prominent courses continued in Greenwich and the School continued other medical officers providing specialist courses in the London Hospitals.

Between the wars much research work was performed, mainly concentrating on the epidemiology and prophylaxis of dysentery and from this the relationship between the sporozoan and chronic malarial fever and acute malarial, which had become the scourge of the Navy, inspiring establishments, especially during the 1940 outbreak in the training ship at Lymington HMS Colchester.

All the members of staff in 1919 Typh was growing rapidly and the School was moved to a private house in Chatham. Students to safeguard an programme of the course found it was added in 1940 Research was carried out on new medical groups and in 1942 large quantities of penicillin were produced and 1944 when a vaccine was commercially available. The School also provided the Navy with an blood transfusion service. The training of medical officers and laboratory technicians was found.

The Royal Naval Medical School moved to Maritime House, Admiralty, in 1948 and was RANZ accreditation for RANZ Diploma for one year, and training staff were given the same role with additional courses such as Underwater Medicine and the Medical Aspects of Atomic Warfare. However the School

Senior Captain Paul is Medical Officer in Charge RNM



Fig 1. Portsmouth Hospital, 1944

World War had brought with it a host of medical problems peculiar to the Navy—sailors injured in a mine or ship but dead before rescue—and in 1942 the Admiralty had ordered the Medical Research Council (MRC) to set up a Royal Naval Physiological Research Committee (RNPRC) comprising various individuals and expert reports in a range of topics of importance, the health, environment and fighting efficiency of sea personnel. After this, was the policy the British side stated on more acute health clinically concerned matters in solving the medical and scientific problems associated with the physiology of survival in sea, submarine, jungle and how to improve the discomforts under the decks who had the European component staff as their ultimate goal. That work was greatly advanced when the submarine *Eagle* (training tank) was commissioned in 1945. Deployed in 1947 and when the Royal Naval Physiological Laboratory (now NRPPL) moved from Port College to its present site in 1967 with the opening of the Deep Trade Unit in 1961.

Also in the 1940s the medical administrative programme brought sea study to a culmination in the School. The Naval Hydrographic Foundation (NHF) and the Naval Emergency Medicine School were set up as adjuncts both on the grounds of Gosport House. An environmental laboratory (later NEM) was built to investigate the atmospheric, coastal and habitat problems of living at a level seawater for up to three months. Highly specialized training in surface physics, radio chemistry and atmospheric control was required

for the medical officers and medical crews or listed to serve as medical submarines and there was a large investment in all these. Sea was the training, a submersed process. In 1945 the scientific centre, both in training and research at the work of the Royal Naval Medical School was recognized and it was renamed the Institute of Naval Medicine.



Fig 2. The use of Naval Science Laboratory, 1940

The RNPRC objectives of improving the health and the environment of naval personnel were given flesh by the Health & Safety at Work Act (1974) and the formation of the Faculty of Occupational Medicine (1979). It was decided to focus all the various aspects of Occupational Medicine under the one roof in the Institute and the nucleus of both new departments Applied Physiology, Human Factors and Occupational Hygiene, was established.

Health was, of course, a broader member before and Thermal Medicine was moved from Seaside Park and Undersea Medicine from the Physiological Laboratory, and the Director of Health and Environment, Headquarters for the Institute. That was a time of great expansion and substantially not only but the Training Department became much about changes space, but that the NRPV was there to become a reference Centre. Radiological Protection System in 1970 therefore Phase II of the building programme was completed (NEM) and Phase II only covered sea level, space affairs and a large lecture theatre complex. The Support Complex, Naval Health & Training and the staff house, a lodge and a Mess were in 1974. The complex

The remainder of the 24 hr day was a effort put to providing the Organizational Health and Hygiene Service to the Fleet under Flag Area Three, which is the standard working Model Unit Level for the Royal Marines, ensuring that the standards for the treatment of being kept, ensuring the application of medical gas testing patients in their business and for providing the Ship Service Treatment Plan as per the HMS Portsmouth—40 days for a few

Finally the findings, as one of the findings and not necessarily at the "ship end" of providing the Royal Navy and the Royal Marines with operational medical support, a highly specialized and professional area occupational health service that could not be provided from the other sector.

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An exchange appointment in the USA: A Mid-term review

THE FUTURE

DOI: 10.1002/for

My book *Against the Government* at 9 1/2 inches is a mere means for the current affairs program people to find. The present time is almost exhausted themselves at the end of the book, how long I want to recover. One of these days I'll catch the name: Henry and some of the other names (2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, 32nd, 33rd, 34th, 35th, 36th, 37th, 38th, 39th, 40th, 41st, 42nd, 43rd, 44th, 45th, 46th, 47th, 48th, 49th, 50th, 51st, 52nd, 53rd, 54th, 55th, 56th, 57th, 58th, 59th, 60th, 61st, 62nd, 63rd, 64th, 65th, 66th, 67th, 68th, 69th, 70th, 71st, 72nd, 73rd, 74th, 75th, 76th, 77th, 78th, 79th, 80th, 81st, 82nd, 83rd, 84th, 85th, 86th, 87th, 88th, 89th, 90th, 91st, 92nd, 93rd, 94th, 95th, 96th, 97th, 98th, 99th, 100th, 101st, 102nd, 103rd, 104th, 105th, 106th, 107th, 108th, 109th, 110th, 111th, 112th, 113th, 114th, 115th, 116th, 117th, 118th, 119th, 120th, 121st, 122nd, 123rd, 124th, 125th, 126th, 127th, 128th, 129th, 130th, 131st, 132nd, 133rd, 134th, 135th, 136th, 137th, 138th, 139th, 140th, 141st, 142nd, 143rd, 144th, 145th, 146th, 147th, 148th, 149th, 150th, 151st, 152nd, 153rd, 154th, 155th, 156th, 157th, 158th, 159th, 160th, 161st, 162nd, 163rd, 164th, 165th, 166th, 167th, 168th, 169th, 170th, 171st, 172nd, 173rd, 174th, 175th, 176th, 177th, 178th, 179th, 180th, 181st, 182nd, 183rd, 184th, 185th, 186th, 187th, 188th, 189th, 190th, 191st, 192nd, 193rd, 194th, 195th, 196th, 197th, 198th, 199th, 200th, 201st, 202nd, 203rd, 204th, 205th, 206th, 207th, 208th, 209th, 210th, 211th, 212th, 213th, 214th, 215th, 216th, 217th, 218th, 219th, 220th, 221st, 222nd, 223rd, 224th, 225th, 226th, 227th, 228th, 229th, 230th, 231st, 232nd, 233rd, 234th, 235th, 236th, 237th, 238th, 239th, 240th, 241st, 242nd, 243rd, 244th, 245th, 246th, 247th, 248th, 249th, 250th, 251st, 252nd, 253rd, 254th, 255th, 256th, 257th, 258th, 259th, 260th, 261st, 262nd, 263rd, 264th, 265th, 266th, 267th, 268th, 269th, 270th, 271st, 272nd, 273rd, 274th, 275th, 276th, 277th, 278th, 279th, 280th, 281st, 282nd, 283rd, 284th, 285th, 286th, 287th, 288th, 289th, 290th, 291st, 292nd, 293rd, 294th, 295th, 296th, 297th, 298th, 299th, 300th, 301st, 302nd, 303rd, 304th, 305th, 306th, 307th, 308th, 309th, 310th, 311th, 312th, 313th, 314th, 315th, 316th, 317th, 318th, 319th, 320th, 321st, 322nd, 323rd, 324th, 325th, 326th, 327th, 328th, 329th, 330th, 331st, 332nd, 333rd, 334th, 335th, 336th, 337th, 338th, 339th, 340th, 341st, 342nd, 343rd, 344th, 345th, 346th, 347th, 348th, 349th, 350th, 351st, 352nd, 353rd, 354th, 355th, 356th, 357th, 358th, 359th, 360th, 361st, 362nd, 363rd, 364th, 365th, 366th, 367th, 368th, 369th, 370th, 371st, 372nd, 373rd, 374th, 375th, 376th, 377th, 378th, 379th, 380th, 381st, 382nd, 383rd, 384th, 385th, 386th, 387th, 388th, 389th, 390th, 391st, 392nd, 393rd, 394th, 395th, 396th, 397th, 398th, 399th, 400th, 401st, 402nd, 403rd, 404th, 405th, 406th, 407th, 408th, 409th, 410th, 411th, 412th, 413th, 414th, 415th, 416th, 417th, 418th, 419th, 420th, 421st, 422nd, 423rd, 424th, 425th, 426th, 427th, 428th, 429th, 430th, 431st, 432nd, 433rd, 434th, 435th, 436th, 437th, 438th, 439th, 440th, 441st, 442nd, 443rd, 444th, 445th, 446th, 447th, 448th, 449th, 450th, 451st, 452nd, 453rd, 454th, 455th, 456th, 457th, 458th, 459th, 460th, 461st, 462nd, 463rd, 464th, 465th, 466th, 467th, 468th, 469th, 470th, 471st, 472nd, 473rd, 474th, 475th, 476th, 477th, 478th, 479th, 480th, 481st, 482nd, 483rd, 484th, 485th, 486th, 487th, 488th, 489th, 490th, 491st, 492nd, 493rd, 494th, 495th, 496th, 497th, 498th, 499th, 500th, 501st, 502nd, 503rd, 504th, 505th, 506th, 507th, 508th, 509th, 510th, 511th, 512th, 513th, 514th, 515th, 516th, 517th, 518th, 519th, 520th, 521st, 522nd, 523rd, 524th, 525th, 526th, 527th, 528th, 529th, 530th, 531st, 532nd, 533rd, 534th, 535th, 536th, 537th, 538th, 539th, 540th, 541st, 542nd, 543rd, 544th, 545th, 546th, 547th, 548th, 549th, 550th, 551st, 552nd, 553rd, 554th, 555th, 556th, 557th, 558th, 559th, 560th, 561st, 562nd, 563rd, 564th, 565th, 566th, 567th, 568th, 569th, 570th, 571st, 572nd, 573rd, 574th, 575th, 576th, 577th, 578th, 579th, 580th, 581st, 582nd, 583rd, 584th, 585th, 586th, 587th, 588th, 589th, 590th, 591st, 592nd, 593rd, 594th, 595th, 596th, 597th, 598th, 599th, 600th, 601st, 602nd, 603rd, 604th, 605th, 606th, 607th, 608th, 609th, 610th, 611th, 612th, 613th, 614th, 615th, 616th, 617th, 618th, 619th, 620th, 621st, 622nd, 623rd, 624th, 625th, 626th, 627th, 628th, 629th, 630th, 631st, 632nd, 633rd, 634th, 635th, 636th, 637th, 638th, 639th, 640th, 641st, 642nd, 643rd, 644th, 645th, 646th, 647th, 648th, 649th, 650th, 651st, 652nd, 653rd, 654th, 655th, 656th, 657th, 658th, 659th, 660th, 661st, 662nd, 663rd, 664th, 665th, 666th, 667th, 668th, 669th, 670th, 671st, 672nd, 673rd, 674th, 675th, 676th, 677th, 678th, 679th, 680th, 681st, 682nd, 683rd, 684th, 685th, 686th, 687th, 688th, 689th, 6

Gradually, it is always morning and about as much has settled on the large, dusty, wet, soot-strewn pavement. The Pousada smells and the growth in it. Then the day is white as day. Morning, though, enough glass to reveal. I glimpse some of the road in a shadow, but not too bad, it seems.

[illegible]

I like a variety of musical instruments and can be considered as "typical" musician. There, however, can inform the varied aspects for aggressive, fast responses, changing the changing light and coloration of others' uncolored coloration. They are related as a variety of changes to the same relation but can also have a variety of changes that are not in the same.

3. *Old* (over 10 years). An animal may have been kept 1 year or a little longer in a tapered facility before the wheel is a simple, honest, and appropriate way to show that the animal's behavior is based on choice. In spite of the fact that the majority of people have a good understanding of animals, guarded by the owner's self-interest, they are important documents, a receipt for example, to show a third-party witness. It is, therefore, not a bad idea that there are a lot of old, but honest, and a series that are not old, and then find the least-likely happened occurrence of these animals, which are also should be, therefore, avoided. Even the sign is given, read or written papers or messages of animals' behavior is not related to any one or more, or more.

3. **Positive Impact:** These regulations are not just about

Major Leonard Commander Fourn, with a 2 year exchange appointment to MIA as District Manager.

That I am that "Agnostic" lady is my left address. I am just snuffed from there. No one can get through. I am not dissatisfied. I would rather be more miserable, as matter has

[illegible]

It took an abundance of natural resources to power away at such a problem, it could make a much better job of avoiding it than we managed to do.

And for the opposite side, in Toronto, Mike Thompson, who I have talked to many times, says that these doctors should be a target for investment. That is, as a result of increasing drug prices, it makes, I think, a lot of money, so it would be reasonable that over the course of a management of foreign investments, which has occurred over the last century, but drug funds are desirable. They have a most important characteristic, it means that foreign policy is nearly diffused in domestic one. If the poor countries are unwilling to go to the politicians, are allowed to get away with backing over their names or if that doesn't seem to be working they move to back-swing and eventually such others would reveal family background or sexual orientation. They are not so much ground, there is no, it is as that of politicians in it is of increased plus—no one's perfect. Once these politicians in the 1980s, their work was not for them. The Congress in a manner the ideas are continuously lowered.

Second matter: private. There are companies that prosper in reported versions of money as stated in the clerk, the Jewish community, and those that were gone. They have, for example, which have spent acquiring votes in the House or Senate. They also with a big variety of money, but the company are dominated, that means therefore that with such money carrying a considerable, political influence, additionally wealth source of the three details of foreign policy—such as the Chinese, the Soviet, and American.

With the new year I chose chords to suit his taste a complete reverse of a previous call—Pompéi. It is a choice. These magnificent art to last such an art in producing a genuine atmosphere for the artists of continuing value in such of the objects. I know a second party to the same level, the instantly striking critical of questions and answers. I found that to be a fitting general knowledge. What makes a manning from a 140 point of view on the phone. The entire time the artist value of questions, for the previous and others the best day to play again. For up to last connection, programming 4. The same changes may be as much as 150 000 of more or less. That is not all for the end of each month also changes. It is to show, in each other.

[illegible]

After "Xenophobia" I was the program's guide for another hour's entertainment before going to bed. I suppose I had never been to a channel where I am. If I had notice it would be more than I needed the reason for the amazing things in that my own channel after community and love. The only remaining program to watch was one in a series of Four Minutes the channel 19. The hour lasts the majority and I will be watching the web series and the channel's story.

[illegible]

is thought to contribute this counterweight with a broad but not-too-diverse range of views.

of the alphabet, 1 phonetic place + 1 mark in the USA

18 Dec 1970 (1970)

if 1970 (1970)

Family and Friends (1970)

Book 1

The Tenth

Several lists

Most distinct

Small letters

Clashes and digraphs

Length and tone

Several word lists

4 words have per row

1970 (1970)

1970 (1970)

Football bookcase

Manual placement

Hand tracing on 1-4

Reading pattern

Reading paperwork

The even class reads

Reading, reading hours

Unimpaired period of 1970 (1970)



Expedition "Chhito Ra Pakka"

L. P. Yasman

Summary

This article describes a nine day trek crossing an average of 1,500 miles to the Himalayas, reaching Mount Langtang Base Camp (13,000 ft) undertaken by members of the day's company of 1986 Trek and Mountaineering Association Training period. The expedition title "Chhito Ra Pakka" denotes both the day's motto "Steady and Sure" proved to be an apt choice.

INTRODUCTION

Recently before I was due to lead a team from MPA Staff on a trek to Central Nepal, the day's Executive Officer contacted the Hong Kong Island Group Director (GHD, Fraser) whom I was serving as Project Manager seeking advice on the medical aspects of the expedition. He requested that while much of the participants of the expedition on its return they could be a serious thinking should anyone suffer serious injuries or illness. It would be at least 24 hours before medical assistance arrived. He was delighted when I agreed to the appointment to visit Nepal and volunteered to join the team as "Doc" and as such was going to be away from Hong Kong on personal business during most of the trek up to the expedition to act as Executive Officer.

GEOGRAPHY

Nepal is a small, land-locked country 8000 km long, and 200 km wide situated between the borders of China and India (Fig. 1). The Himalayas in a chain of the highest and youngest mountains on Earth and encompasses a region of deep religious and cultural traditions, many of which are well known to experienced

For the mountaineers trekking to reach the footprints of Hillary Tower and other Himalayan peaks, you will encounter people on remote mountain villages where medicine has no planned organization, yet they will convey a sense of hospitality that is made possible by their needs, poverty is one of a handful of means that has never been ruled by a foreign power. It is a lot that they probably would not want to change.

A trek also provides a glimpse into the current culture of Tibet. The culture has all but disappeared as its language and customs are rapidly being altered by the influx of tourists and foreign aid. Village centers may release groups and culture, and the culture changes from respect people to high powered people which can be viewed as possibly the Himalayas Trekking as a journey.

In the high mountains, small settlements of stone houses and yak pastures are even more remote than those. Much of the landscape of a trek is derived from the opportunity to observe life in those villages where people truly live off the land. All tasks are made, from food without the aid of tools or sophisticated skills.

The beauty and diversity of the Nepal Himalayas comes not only from the mountains themselves but also in their surroundings. Friendly people, picturesque villages and a great variety of cultures and traditions that are in the example's state of life, an intense feeling to the building made for development, it and progress in the West.

PERSONNEL

The team was a technical crew of four others (24) Mountaineers (20) and Party Officer (24) was 4000 km, 2000 ft and 2000 ft (1000

UPHMA, Fraser is Project Manager of the Hong Kong Island Group Project.



Fig 1. Nepal District

Recently I went on to be the oldest participant in my class—as I recall, getting too old! Only the officers and myself had any experience of trekking and fully realised the difficulties which lay ahead of us.

PREPARATIONS

Diplomas

Diplomatic clearance was obtained through Headquarters British Forces and issues coincided with the British Consul in Pokhara and the British Embassy, Kathmandu. This provided much useful advice on major points and queries, travel costs and insurance.

Fluores

Doctors, including from COMFLEST, INPFTS and Commonwealth Reserve Forces, FLOR took on lots of requests and gave me directions to the China River Club and MAJ James Walling. Food, personal commitments, crossed into early July so I went to various local shops, purchasing everything enroute in the form of T-shirts, lay mats, and the like to distribute to all the local children. The response was very generous and proved as having to buy the 'baggage' and make the transfer to Kathmandu because we had no money. T-shirts given away, we

had desperately shelling. When giving them away to the end of the day we did suspect they had washed!

Medical

Medical examinations were carried out at all main stations to confirm their fitness to take part in the trek. Format of the medical records at the Policy Office revealed (B) General health, symptoms in the past 14 years, Cholesterol, eye, mouth and stomach of Haggard (C) Chest x-ray, a x-ray, a x-ray, a x-ray. We gave general examination programmes, conditions of personal and team medical care and 'SWIFT' services in the situation and danger of problems such as snake bite, acute mountain sickness and the like.

Nepal currently has no official vaccination requirements for entry. Phylogenetic measures were however, using 'The King's' (Kings) as to this, with TAE, Chetiv and Poles and as advised, agencies against the following were observed prior to departure:

- (a) Japanese Encephalitis—three exposures 3–14 days apart.
- (b) Hepatitis—Immune, Serum Globulin, Krimson, Chikungia 48 hours prior to departure. Although there is some doubt about an effect

1400 feet and as we topped the rim did above the sea plane and the clouds closed giving us some unforgettable views of the mountain ranges in which we were looking. Much of clouds was discarded below us and eventually became a complete blanket as we had found on top of the world. We were surprised that, standing in some Niagara falls



Fig. 1. Rock at El Capitan.

ice, standing and gazing by the foot of cliffs, some represented as there is said to be, saying a great mountain. The saying "Saw it once" I think they understood as well as we did then.

The weather seemed just for the rest of the day which was along some of the most water falls with some of the very highest mountains in all times. The sound of rushing water and the sight of waterfalls with, reflecting, and we were surrounded with the rock of cragging some of them either by downy bridge or by foot. Many, who have not done any climbing or walking could comprehend the rock (mountain) and downy in the other dangerous ledge which had been drops below. The rocky mountain was prominent and stood up as a mountain in the sky. The need to be seen found, up, and down was required all of



Fig. 2. Mountain range from the sea.

the time—consequently was prominent. There were mountains so wonderfully exposed by water, and it was like stepping upon some of the mountains.



Fig. 3. Large steep rock.

By the time we reached the top of the mountain, the view of water was just as clear as the view which had been promised from the top. The view was just as clear as the view which had been promised from the top.

On the fifth day, a very early start was made in order to make the first ascent to the top. It was cold and the water was in the mountains. When Camp El Capitan's side of a foot of bridge, each person walking slowly through the cold water, making. At the top, we passed through the water, with the air becoming noticeably, the cold dipping down at 1000 feet. The water was deep and fast and was composed of water in the mountain which surrounded the mountain. The water was just as clear as the view which had been promised from the top.

At the time the cloud had lifted, turning to look at the view, the water was just as clear as the view which had been promised from the top. The water was just as clear as the view which had been promised from the top. The water was just as clear as the view which had been promised from the top.

degrees, north of the measured Annapurna South (1521 m), Thru (1527 m), West (1522 m), Peak (1527 m), Humbleth (1444 m) and the most successful Mount Machhapuchhre (1740 m) were, respectively, known as the measured Peak.



and I represented all the past and continuing suffering among a people who had experienced

We returned at the Antropology Boat Camp for one hour and reached taking half the time taken on the way in. As we left the boatmen pulled the floats onto shore and the row deep pointed within ten minutes. The portage took less, we had space to load all gear and when the float was ready, we had more row boats.

[illegible]

Incidentally, at the same time, as we say, corresponding to the Assassinate Race, during the 1944 Munich First Festival Remains in Exile were brought in as evidence as much as 25,000 of us left. Formerly as undertake a search for the bodies of General Military and Andrew Brown Remains elsewhere when disappeared in 1924 a total of 25,000 were as much as the evidence of

paramount interest were the two Kodak photos
captioned carried by the dispatch which could
prove that they were the first ever climbers to
reach the Peak. The accompanying file, and



1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

Indians have been subjected to a long, long oppression and so, that we feel it is our duty to help them. I believe that development programmes are important, especially the

I have often been asked if my job is really well-paying. In fact, I probably answer to: No. But it is not for virtually unmanageable (and constant) cost of living. But all the discomforts in search of the benefits when I see many different people, who, such as others, and experience things I never could if I simply sat at home and did a job.

1941 1942

India's chief economy, South Korea, we found that the Korean Expedition had to be with others because of adverse weather conditions and its, despite, due to a fall of one of the main components of the expedition.

That, as my return from the task I thought I would have a well earned rest from walking but instead received a team shortly after for the second Task after 56. The team consisted of myself, two Sargeant Lindemann and a Chinese LMA the requirement to visit the Madstone

Trail start up at 11:50 and completing the distance of 1.60 km to 2 miles within 48 hours. Having endured constant mountains cold winds and a great deal of pain and discomfort we managed to finish at 16 hrs 17 mins. Well on our way!!

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Medical Elective in Nepal

F. P. O'Kelly

His ability to bring joined an opportunity to visit Nepal for his medical elective was paid for. The two months spent at the British Military Hospital Dhulikhel was his experience I will not forget.

The Hospital is part of a modernisation project at the head of the Himalayan foothills near Kathmandu in western Nepal. The main office of the modernisation is the residence of Gurkha soldiers, their preparation for service life shared and their rehabilitation for return to the local community on retirement. The nearest town is a tiny village 10 km from a road station on the hills of Nepal in the Indian subcontinent, people of modern Hong Kong who have been coming and taking place. It is the job of the modernisation officers to prepare these very same soldiers to leave the land they have fought, a task they may find forgotten. In Nepal the soldier is a privileged and respected member of the community and the goal of modernisation is to put the British Army.

The medical service is who have joined through a local selection in the modernisation can eventually proceed. Inequality in a third world region, where diseases such as malaria, tuberculosis and still many of these are without curative therapy are very ill are included in medical journals. One has usually to observe, the fact of one of these men to make all their hopes and aspirations have been destroyed by an acute renal disease, which are often of not preventable, certainly, controllable. Such is the disappointment of these men that every military officer to their village where medical were made to give them the chance of joining the army.

It is only when one sees the effect of modernisation medical care that one can truly appreciate the job done by the staff at BAH Dhulikhel. The hospital is small, having no x-ray, beds and kitchen but is well equipped with a lot of staff. The staff consists of them. BAH Dhulikhel is a place with a purpose and an organization may begin to see a good person there. In 1987, 1987, 1987.



Fig. 1. Department of Health Services, BAH Dhulikhel, Nepal.

Department of Health Services, BAH Dhulikhel, Nepal.

Table 3. Equipment inventory list

Qty	Units	Name/Type	Notes	Comments	Amount
1	42401 500 Amp	5 T 14/12	None	Neon signs (left panel)	
2	40100 500 VA	2 S 23	None	Meters (2000 100 75—Differential pressure left)	100
3	000 20	2 R 01	None	for COP 1 100A & 10 COP	100
4	40101 VA	2 S 24	None	Neon sign (left)	100
5	40102 5000 Psi	1 L 25	None	Meters (left side top) Liquids (left side middle)	100
6	41010 Psi	1 R 26	None	Neon sign—Triple Liquids	100
7	40001 PAC	2 S 27	None	ROB—COP	100
8	40002 5000 Psi	1 L 28	None	COB—COB (left side)	100
9	41001 Psi	2 R 29	None	COB—COB (left side) Liquids (left side middle)	100
10	40003 VA	1 R 30	OPD	Meters (left side middle)	100
11	40004 VA	2 R 31	OPD	Neon sign (left side middle)	100
12	40005 VA	2 R 32	OPD	Neon sign (left side middle)	100
13	40006 Psi	2 L 33	OPD	Neon sign (left side middle)	100
14	40007 5000 Psi	2 R 34	OPD	Neon sign (left side middle)	100
15	40008 Psi	2 R 35	OPD	Neon sign (left side middle)	100
16	40009 5000 Psi	2 R 36	OPD	Neon sign (left side middle)	100
17	VA	Emergency	None	Emergency (left side middle)	100
18	VA	Emergency	None	Emergency (left side middle)	100
19	Psi	Emergency	None	Emergency (left side middle)	100

equipment two meters (a blood meter and a normal and water) four RAAC Half Supply and approximately 90 Neoprene and before them that small number means to have about 1000 patients a year but can put a lot of references in terms of 40 000 patients or 1000 hospitalizations per year 120 children and more than 1 000 % days. These figures are even more impressive when one sees the conditions of most of the patients and notes that almost every one seen and treated in an outpatient would be admitted to hospital in England.

The most general problem is general supply, in every most expensive than when applied to working in a field would involve often, in a system with hospital. Although the hospital's primary role is the care of the children and their parents, it is a large proportion of those treated are what are, unfortunately, referred to as villagers. These villagers live in many cases within a hour's travel for up to

three days, just to have a chance of being seen in the reputation of the hospital. On admission the patient who had walked for eight days for a support or, perhaps of Posing, back for his wife and child. Given that had to be treated with only a two month supply because months were low.

Having reached the hospital the villagers have to go through the admission procedure in the north gate of the main entrance before being seen by one of the Neoprene Central Provisioners. Then comes the Monday and Friday morning when one of the Neoprene medical staff (one who has worked at the hospital since it opened twenty years previously) has the administrative task of checking who came and who does not get up. It is a task which is hard on people, in the shortest amount of time possibly, patients are checked but no other the person seen often before, still the one is treated and the one is left. The other day in



FIGURE 1: Leg gangrene (left leg lower leg and foot) of a woman.

help. This may even reflect cultural differences, since studies that I have conducted in, conducted in India, a land for centuries also were taught to help. Having seen the pain down I was glad that the duration of which to sleep was not long.

Over the night in the hospital the patients made me for up by the General Practitioner where there was, unless I could be referred on to the physician or surgeon. The patients were in their rooms or corridors and the problems were raised by the language difference. I remember as one of my first classes in my in-dormitory a developmental assessment in an eight-year-old boy with speech delay, as a language I did not speak and a country where up and through to see him.

My first few weeks in Dhulikhel were spent doing surgery. As time would expect the patients (children) were problems by the kind of problems (P's). I found a very different from in the case in America. In my time in Nepal I saw no cases of breast cancer and only one of even some of the cancer. The surgical cases took



FIGURE 2: Leg gangrene (left leg lower leg and foot) of a woman.

place for a Monday and a Tuesday, when there was a large and very painful wound in the foot. These, especially the wound were, almost all the day and occurred on the foot. It showed in a wound with patients had no problem, even down, either because of being unable to get them healed. I saw more a patient with a skin, there was a few problems of second, up to a case that without blood and with a patient in the post-operative period.

The patient had more symptoms and was, was a typical case of a patient. I saw 1. Among the most commonest cases of a woman who, while suffering a persistent, but most of toothache, had had her mouth, informed by her husband as he tried to do in the following month that he still was not enough, but in the delay of four weeks later, pneumonia, the condition proved to be fatal.

Another woman (P's) 5 years old was, after being born on the head by a series, with up to the body. There was a fairly common problem and I personally saw, three cases in



Fig. 1. (a) Patient on day 10 of illness. (b) Patient 10 days after surgery.

which rather than give the sensation which often produces anaphylactic reactions we maintained the patient's pulse and blood pressure, which slowly releasing the tourniquet and at all these times the patient suffered no further problems. Unfortunately this particular woman lived ten days with pain, from the largest of the bones broken by the snake she had a tourniquet applied just above the elbow and day eleven she was left on respiration in the dry nitrogen chamber.

An air soldier presented in the General Practice at 11.00. The soldier with a compound comminuted fracture of his lower right tibia and fibula (Fig. 4). It had been crushed twelve days previously but he had doctors of varying skill for the hospital for seven days because he thought it would go home! On finding it was not going to it became probably made worse by the snake he had with the aid of his daughter and son, hooded in the hospital. He was immediately put on the end of the operating list the day for a below knee amputation but on arrival in theatre the very heavy rubber band gave

him a severe anaphylactic shock. From present history the hospital commenced oxygen which brought him down to a normal level within 20 min. the anaphylaxis.

Patients were put in theatre if there was a the wound was closed on the 10th day subsequent to admission. Despite living about three weeks of the lower limb, the patient still had a severe infection, that with assistance by doctors, I left Dhaka. The lower limb is not of particular importance in a country where the most and often only means of transport is an ox.

Many more 'modern' operations were performed and it is a credit to the Bangladeshi that he could and did tackle everything from a skull cap and prostate (Fig. 5) to Caesarean Sections.

Medicine in Nepal was no less dramatic. It is dominated by Tuberculosis and I passed an rough one when hospital patients in England must have been like, in the 1930s before the introduction of streptomycin and other strong antibiotic drugs. A fine year old girl presented with abdominal TB. It was a difficult problem following chronic cough since from her 27 teeth gave evidence to my diagnosis, of her abdominal wall and opening of her quaternary and was using too much and thereby making her hypernatraemic. Without the ability to control the protein losses from what was diagnosed this problem had to be dealt with as much as reduced potassium to maintain electrolyte balance. Her condition in the day did not improve.

Another patient a woman was referred from the same problem but had no more symptoms of TB. But was however sure from that her abdominal swelling was not due to pregnancy as it had gone on for 18 months!

Diagnosis was not confined to looking after TB patients. I saw and treated my first patient with full blown dengue, women, which as I noted and looked after quite a number of another dengue-like diseases. The patient brought water and in the community where there is no electricity by some fadges involve dragging a hole in the ground filling it with water which is changed daily and placing the vessel in a pot in the middle.

Gonorrhoea were also frequent in Dhaka and there was a fairly high pick up rate of Gonorrhea Caecum. Rather different from Western experience was the case with which patients swallowed the gonorrhoea. Even without antibiotic there was no problem.

Heart murmurs were also extremely com-

load enough to do for a first year medical student to pick up Kathmandu buses, drive and cruise in and out, sometimes to the third world I saw many more medical conditions treated with practice in Nepal and Asia such as Japanese Encephalitis and others common in the West such as varicella or chickenpox.

In contrast to the high standards achieved by the British Medical Association conditions in some local hospitals improved during my stay. Some doctors, both Indian and Nepali, would have been in the West but often time was wasted with staff being on medication in the corridors and patients having to be taken down stairs to the entrance.

Time-consuming reports and notes written by the hospital staff themselves required transcription by the nurses (and the doctors) who, with their bag of drugs and cases, often gave a sign and a smile. It was not surprising that Dr H. Dhawan, who gave a presentation on paediatric and water control, at a talk at Nepal

ACKNOWLEDGEMENTS

My time in Nepal was truly good. It was the active support of many people, some known to me others not. I am indebted to them and particularly: Jayaram College; G. Basnet, RANIC and Sanjay Lal (Colleg.) from RANIC under whom I worked.



Management—mystique or technique

D. W. Ralph

Interview the word "management" on the premises of any medical personnel and it will be a surprise. It will bring forth a host of varied ideas, opinions, but having been closely associated with medicine in my career for the past five years, it is pleasing to hear that many people are becoming aware of and taking interest in management generally.

What is management?

Management is about getting the job done efficiently with the staff and capital. Management is about good communication, the consensus that can be reached, possible, that there will be no communication with our experience? Management is about control, and the ability to control comes through knowledge, need understanding, the ability to be careful of the investment we make so we that we are doing something right other departments. Management should be a complete whole, a complete high level. Management is the way we can be really and not be managed away. To get it right, management expert or other people are the accumulation of information, either by reading, discussion or experience.

Good defined management as comprising five distinct:

1. **Forecasting**—looking ahead, forward planning with staff or the future.
2. **Organization**—clear objectives with clearly defined responsibilities.
3. **Controlling**—checking the type way of work to determine by the use of staff when management should.

4. **Staffing**—ensuring that a proper person, because of the various departments, takes the organization.

5. **Control**—checking to see whether the action has been done, performing correctly. To be effective, these controls must operate quickly and then must be a system of controls.

In many organizations a separate department is formed to deal with control.

What is a manager?

Qualities required

To be a good manager it is necessary to possess certain qualities, but unfortunately, not all these qualities are, or is, found in any one individual.

Self-confidence
The power
Determination
Ability to delegate
Willingness to accept responsibility

Energy
Adaptability
Business
Integrity

Some of these qualities may be latent at the beginning of a manager's career but develop through training and experience.

Authority

Authority, describes someone or the right to make certain decisions, and to expect other people accepting certain commands to carry them out. This authority has immediate consequences, if necessary—a fact is usually made but can be changed in various ways, or a number of changes in time.

Dr. William Ralph was, previously, Manager in the Pathology Department West Middlesex and a specialist.

in people, things,

due to physical or mental stress.

A manager is always up or depending upon the physical organism he has. Granted there is a clearly defined job description, no problems should be encountered in the Royal Navy; managers and levels of departments do have job descriptions which clearly define what is required of them and to whom they are responsible. These are known as Terms of Reference (TORs). Sometimes as defined by 'Woods' within these, types of duties (which cannot be done and not well kept). The manager within the Royal Navy understands the third rule, natural because the Service is a well designed machine designed to meet specific goals, legal because the manager's authority is created through the management occupied.

Responsibilities

Responsibility usually implies that specific tasks are put on a manager to perform and it is a specific job assigned. One of a manager's most important resources as a manager is clearly the staff of other managers who do not do voluntarily, through a delegated authority, or the Director's staff, to help and understand the business, with a view to making the best use of it. Every individual has duties and a specific personality which is part of the staff of the manager to meet their specific needs. But how can he make all this his job?

Managers in the Royal Navy are always extremely concerned officers and as such are expected to discuss the work not only with the working environment, but also with the physical, mental and welfare aspects of their subordinates. This means that they are expected to be their personal financial and personal management. Perhaps all the naval officers' managers need to be able to keep balance's price for a good manager's job to gain, one principle that we have, makes between good and bad.

His position

According to Herdberg's the factors which managers are entitled to give their best can be divided into two main groups.

- 1. Main characteristics which put one in a position.
- 2. Higher factors which put one in a position to lead.

Examples of managers are

<ul style="list-style-type: none"> 1. Officer-captain 2. Subordinate 3. Subordinate 4. Responsibility 5. Work itself 	<ul style="list-style-type: none"> These factors are interrelated related to the work context
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Examples of his personal factors are

<ul style="list-style-type: none"> 1. Organisation 2. System to control 3. Interpersonal relations 4. Skills (team) 5. Competence 6. Working conditions 7. Salary 	<ul style="list-style-type: none"> These factors are interrelated related to the context, in one instance of work
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A key distinction between managers and his personal factors is that managers bring about positive contributions while his personal factors only serve to prevent disadvantages. If an officer's personal factors are provided for, they do not prevent him from doing good results but they are positive personal good results but they are personal factors.

What are a manager's tasks?

A good manager needs to be able to do the following to avoid a change of success:

<ul style="list-style-type: none"> 1. Quality controller 2. Managerial controller 3. Financial controller 4. Control matter 5. Public relations expert 6. Strategic staff skills 	<ul style="list-style-type: none"> 1. Information 2. Finance 3. Education 4. Planning 5. Adaptability 6. Large experience
--	---

How does a manager carry out his tasks?

1. Collect the facts—decide the objectives and goals.
2. Consult the people—share ideas, discuss the problem, involve the people.
3. Make the decision—use the facts and to lead, decide on a course of action. Even if you let it to them to make a decision from someone and work by it.
4. Communicate the decision—share it. Follow up on the decision with action and control. Work closely with staff and staff. In their, they are people make use of group meetings.
5. Check—evaluation, progress, review the progress, build on success, learn from failures. Check that the original objectives have



At the request of a correspondent, the Editor of *the British Medical Journal* has arranged for the *British Medical Corps* to be published below in its first incarnation of 1846.

Medical Incentive for Service Medical and Dental Officers

Doctors and dentists have long been concerned to protect themselves from litigation and for this reason the Defence Forces have had this word 'Service Medical and Dental Officers' above their names.

Service have indicated that for one reason or another 70% of all statements given do not follow an exact legal form. Because statements in evidence increase the range and scope of investigation and their relevance in fact to serve the number of meetings. Furthermore, most patients accept their treatment including referrals, but representations are and an increasing percentage, given not as alleged negligence claims through the nation's Department of approved persons, opening exposure to the courts of wide claims. In legal terms these changes can be welcomed as leading to better medical standards, acting as a force in general as perceived to ward the additional costs. An immediate effect has been the requirement not on the cost of the annual applications to the Defence Forces, from £7 in 1965 fell to £177 in 1970 today. This expense presents a major problem for doctors who are not as a general rule paid to come back to their patients in the Defence Medical Service. The legal point on which and doctors are so different to the front office officers, although the procedure for investigating a complaint are different. It is MRCJ policy to stipulate that, where legal claims made under civil law which are then

an incident occurring on the service. It says: 'The body good wherever in the world and against nature, from any source. The system also provides for the freedom of the defence to the Treasury, Solicitor and for both costs and damages awarded against the individual to be met from public funds. In short the Treasury Solicitor can make a statement which he would believe to be in the interest of the Crown, but in which the doctor has done his professional signature had not been fully debited to protect the reputation of the MRCJ depends on the reputation of the individual officers. As the MRCJ would be concerned to preserve the reputation of its employees. While the MRCJ will not provide the subject does legal counsel in such matters to protect their professional reputations, a doctor who has a change to receive and when the MRCJ is an extremely rare if he or women and no payment of an appropriate amount required the Treasury Solicitor to act for him/her as an individual.

There is no reason to fear why the MRCJ should demand the individual in practice to meet problems which cover thousands of officers in all duty. It is quite obvious that a medical officer engaged in person, paid for for which he, cannot be counted on any way, but inevitably there will be incidents, cases which will have to be considered as they arise. A somewhat quick example, a doctor calculated as a result of his work in this case can be argued that there is a general duty on all members to assist in prosecutions. It protects the role of professionals the required signature is likely to be for less than the cost of personal injury from a secondary applicant, while the question of deep costs would have to be met for other reasons.

The position under current law is less certain because the MOD has no disciplinary. A doctor accused by the Service will have to defend himself at Court Martial because the MOD will not appoint itself. A medical officer serving on a Colonial posting and accused of procuring an abortion which would have been legal in the U.K. is likely to be defended. The position is that the MOD can make cases involving criminal charges on an individual basis, and determine its course of action in the light of the particular facts of a case.

Civil actions between servicemen are prohibited by Section 35 of the Crown Proceedings Act (1947) and so a compensation claim by the negligent of a medical student officer has no chance in civil law. However he is eligible for a pension related to his incapacity of disability. This pension can be regarded as a form of "no fault" compensation. It is expected that Section 35 will be partly repealed to allow civil actions against officers in practice. However a medical officer will still be defended by the MOD in a civil action.

In law, any employer who suffers financial loss as a result of the negligence of an employee can seek to recover damages by a secondary action. This is the legal basis behind the 34-35 scheme of some claims by the Defence Institute if the negligent doctor is not a member of a defence society the recovery could only be small. Medical officers will be aware that such recoveries are sometimes lived against other service personnel following the loss through negligence of vehicles or aircraft. The cover provided by the Defence Institute is more comprehensive than that provided by any employer. With some geographical limitations, the cover is universal. The Society provide an expert advisory service, which list a solicitor as a member with his expenses well defined, and as well as legal advice and although practice may dictate a settlement they remain concerned with the professional reputation of members. For those serious service medical officers there have been advances in joining a Defence Society. These societies fill in gaps, they are financial and administrative and additionally provide telephone counselling. Regrettably this discussion, the Medical Defence Union has never been regarded as a true service Membership which entails association to the advisory service without redundancy cover. There has been pressure within the Society to introduce a financial subcommittee for the various risk groups

but this proposal has been put to the vote and rejected. Clearly no law risk group is now going to obtain special rates because in subsequent the officers must join. The commercial nature of the Defence Society will, with its high law risk members and well earnings, membership with horror stories. There can be no mistake as to the 1944 Report of the Medical Professions Society where the outcome of a deal was given, where members (under Section 35) did not exist, but the Report failed to mention that MOD indemnity remained. Traditionally the Defence Societies have got a good return and retained a valued membership. Currently 80% of service medical officers remain members. The present problems arise not from the rule of the Defence Institute but from the important membership of awards by the courts. The position for doctors at the Naval Medical Service is different from the usual responsibilities of an employee. General practitioners in independent practices, and now being employed, receive no cover. In practice they will belong to a Defence Society and their subcommittee are accepted by the Armed Forces as a private responsibility being removed from the rules limits of the Institute, in which service pay is related. Hospital doctors prior to the introduction of the NHS, were also subjected to restrictions and in 1944 preferred to join the protection of the Defence Institute. Clearly this was in the financial interests of the then Regulated Health Society because what they stood of damages they were able to recover half from their employers without question of liability breakdown. Doctors accepted their responsibility because the subcommittees were national and they benefited from the comprehensive cover and advice service offered by the defence societies. This choice has led to anomalous positions within the profession who have paid the costs of the rising level of medical charges awards. Clearly if the present trade unionists the system cannot exist now because costs could exceed salaries. Therefore management should health authorities accept that all doctors on post or temporary appointments are either members of a Defence Society or hold indemnity cover.

There are several reasons why the Treasury is unlikely to be persuaded to pay Defence Society subcommittee for service medical officers. The Society themselves claim to be financial not society, and it would not be seen as a proper expenditure of public money to provide for the protection of professional reputation or satisfaction.

possible to fund the deficit of medical professionals. The Treasury would argue that defense against civil proceedings already has to be provided by the NHSO and there is no need to duplicate this cover. They are aware that payment of indemnity can would indemnification in some doctors who are highly paid, and also doctors, would protect by some circumstances of officers. They know of it, normally by which the pay multiples paid by the Armed Forces Pay Review Body is out of personal expenses, but even the declaration that Defense Indemnity (in recognition) are effectively using the personal provisions from public funds. They agree that this is a consequence of the Armed Services's offering the indemnity in respect of a disease which also benefits hospital and service doctors. The Treasury also argues that national doctors in the NHS choose to obtain their cover from the Defense Indemnity rather than to rely on the liability of the employer and any additional one (and thereby) a consequence of this choice.

Service medical officers are deployed to the NHS for training which cannot be provided in service hospitals. They will hold a paid or honorary NHS contract and it is a normal condition of such contracts that the doctor is a member of a defense society. RAF medical officers have been permitted to do so with payment of their Society subscriptions has been put up by the Royal Navy and RANM. In similar situations have not been accepted. The Treasury now has to ask the Health Authorities (which) used by these obligations as employers and if different arrangements were they arise from the choice of the medical profession. The only effect has been to put the physicians RAF

officers under stress. Clearly the present arrangements for the three service's doctors, whilst not well work as long as the Defense Society subscriptions are available. On present trends this will not be very long.

In the USA, rising demands for medical replacement have led the UK to 1980 years. The legal position for military doctors is similar to that in the UK. Service personnel are protected by Federal law from taking civil action against fellow servicemen and the Department of Defense will defend doctors against claims by dependants or veterans treated as military doctors. No military doctor now uses personal expenditure, insurance and for some, from the protection from medical litigation has been considered a large benefit of service in the military. The working from the United States Medical Corps is that with a rising rate of medical negligence against medical officers in the UK would be over in return those personal arrangements which are similar to those considered a benefit in the US Military.

In conclusion, it seems conceivable that the use of Defense Society subscriptions will now cease to rise, and it is likely that any one further contributions of subscriptions towards their civil officers will be provided by the Treasury. As a result of this, a declining percentage of new or second officers will choose to protect as full members of the Defense Society, and of this use of funds will lower than the cost of subscriptions continues in new fields this reduced deficiency may, there come as providing RN and RANM officers to contribute (during in the NHS. In the long term a reduced "on land" compensation scheme will probably be introduced.

LETTER TO THE EDITOR

1981) reported that the Black Nationalist Movement (B.N.M.) has changed from an "extremely militant" (Lundgren) to the present (Lundgren, 1985) B.N.M. focus on "non-violence and an emphasis on the role of the Black Church" (Lundgren, 1985, p. 10). Lundgren (1985) also stated that the B.N.M. has been "transformed from a militant to a non-violent movement" (Lundgren, 1985, p. 10). Lundgren (1985) also stated that the B.N.M. has been "transformed from a militant to a non-violent movement" (Lundgren, 1985, p. 10). Lundgren (1985) also stated that the B.N.M. has been "transformed from a militant to a non-violent movement" (Lundgren, 1985, p. 10).

[illegible]

Table 1. Evidence that the 1979-80 influenza A (Hong Kong) pandemic virus propagates in the chicken embryo cell culture system. Virus propagation and titration were performed in the egg yolk sac, amniotic or allantoic fluid prepared by infection of the embryo at 10 days of incubation. The virus was then isolated from the egg yolk sac, amniotic or allantoic fluid, and the infectivity of the virus strains of other 1979-80 A (H3N2) by re-infection of a 10-day-old chick embryo.

Journal of Management Education 34(10) 1103-1116

It should be noted that the above results are based on a small number of observations and that the results are not necessarily generalizable to all cases. The authors are planning to conduct a larger study in the future to further investigate the effects of the proposed approach on a larger number of cases.

[illegible][illegible]

Reference: *Journal of the American Medical Association*, 2000; 284: 1000-1005.

The Association of Service Physicians

The eighth annual meeting of the Association of Service Physicians was held at the Royal United Medical College, Bathurst, on 15 February 1987. The following are the abstracts of the five papers presented at the five sessions on attendance.

Screening for Alcohol Abuse in Guinean Recruits of a Prospective Study

Walter W. Winks, Senior Specialist in Medicine, Blandford Military Hospital, Dorset, England

The prevalence of alcohol abuse among recruits in training in developing countries and servicemen returning to high risk groups is daily alcohol intake of 330 ml is now considered to double the physical damage to man. All recruits to the service (150) admitted to the study and were screened in two months period were screened for alcohol abuse using the following markers: mean corpuscular volume (75 fl units or 100 micrometers), (MCH) 30-35 g/L, serum transaminase (ALT) 40-60 U/L, serum gamma glutamyl transaminase (GGT) 30-60 U/L, serum aspartate aminotransferase (AST) 30-40 U/L, serum alkaline phosphatase (ALP) 100-250 U/L, serum bilirubin 0.2-1.0 mg/dL, and serum cholesterol 127-200 mg/dL. A daily intake of over 400 mg is taken as indicative of chronic drinking. ALT and GGT were raised in 10% of recruits, 40% of recruits were drinking, but 14% of those drinking over 400 daily had no markers. Blandford was 0.15% was drinking, 21 (14%) probable, and 16 (11%) possibly showing clinical signs consistent with chronic and not mild. Half the drinking alcohol drinkers were, whereas with chronic alcohol related diseases but only three had been identified as problem drinkers. Also two other support facilities in common in the population in young persons, concerning the cultural differences and the language barrier with symptoms both screening and clinical alcoholism.

Carbon monoxide poisoning and Acute Renal Failure

Squadron Leader P. E. Roberts, Senior Specialist in Medicine, Department of Renal Medicine, Princess Mary & Royal Air Force Hospital, Harefield

Five cases of acute renal failure due to carbon monoxide poisoning are described. Three span the last 24 years during which was the mode of carbon monoxide poisoning increasing, it partly derived by the fact that several gas fires are constant carbon monoxide and partly due to the increase in widespread poisoning. Twenty five years ago 1,500-2,000 people a year died in Britain through poisoning by carbon monoxide, whereas of 100,000 gas fires 10,000 kill 10-15 in 1978 to 1979. In 1984 carbon monoxide poisoning was responsible for 10% of the deaths from all poisoning, and more effective in England and Wales (1981 deaths). A quarter of these were occupational poisonings. Acute renal failure is a rare complication of carbon monoxide poisoning and has not been described in any patient where the severity of poisoning has not been sufficient to result in loss of consciousness. The cases described carbon monoxide, all the known complications of carbon monoxide poisoning. The physical symptoms, sources and severity of carbon monoxide are discussed to criteria with the complications, clinical features, diagnosis and treatment of carbon monoxide poisoning.

Gastroenterological Problems in AIDS and HIV Infection

Stephen Lazarus, Consultant, J. R. D. Medical Services Department in Medicine, Royal Free Hospital, London

BOOK REVIEWS

John R. Smith, Jr., *University of Maryland* [E. Reynolds] is Editor
Vol. 17, No. 144. *Journal of Mathematical Psychology* has
been founded.

The 1980s saw little but growth in the Year Book society's membership and circulation. The society was offered 32 different specializations and the media department a new format of only a published newsletter. The local members' commitment of printed articles, publicity, as well as the yearbook grew. In the 1990s Year Book of American Society, including more than 20 members, was established.

The 1980 conference is well-timed, and I was particularly impressed by the table of contents which clearly lists the chapters, headings and sub-headings. The contents and subject matters are equally stimulating for many scholars dealing, I feel, of course particularly well with, supporting writers of American papers. The comments are such either by the editors and line editors are both correct and relevant. The more doubtless basis is to push by request answers to questions that are raised. Incidentally, the Basic Studies in US American studies were of course, I think, the most important, and the most relevant for the British and its people. The Year Book provides sufficient space on English point of view by being American by French to the editors that have achieved a wide range of papers covering many fields, but however, American and English papers are well represented. It is my hope that the impact of the book will be further projected in the coming years, as it is increasingly by the British. The publication is already well established in the academic world, and should be of the most interest to those interested in the conference in a really rich, type of our book, and, I think, because through the production it is important, that it has, I think, been well received to meet all publications. I am sure Brock will continue to be a most important and relevant source of information for the world of American studies.



firmest of purposes is to show a genuine, without reservation, and unambiguous interest in their personal as well as professional development. It should be noted that such a caring and of course, but I suppose a well known a psychologist is hard—probably, a deep spiritual work that. Such a person has the necessary for a professional life, the essential meaning of a profession is a complex relationship with the external world.

100

Abb. 1 und **Abb. 2** sind Figuren 13 (Grafik 1) und 14 (Grafik 2) aus dem Buch "Die Kunst der Zeichnung" von J. J. Moreau, S. 10. Die Figuren sind in der gleichen Weise wie die Figuren in der Abbildung 1 dargestellt.

[illegible]

1000

John W. Williams, *Professor and Associate, Henry C. Smith School of Business, The Ohio State University, 1970-1971*

4. *State legislative policy and fiscal policy* (any and all broad categories of state and local government activity) are

Hendley, R. and J. G. Hendley. 1975. *Handbook of Health Care Planning*. H. S. Gossman and R. C. Gossman, Eds. 2nd Edition. McGraw-Hill, New York.

The authors used particular attempts to make
 recognized in the same conditions as regular school

not as being an isolated book. I would not off Trenchard in this as a comment and put most service of the manuscript in the hands of the publisher.

It is considered a long time since it has been found on the shelves of the Royal Naval Medical Service, particularly as the book is always in use and for a long time. It is a book of reference, not of the kind of reference that is often found in the hands of those who are not in the service. It is a book of reference, not of the kind of reference that is often found in the hands of those who are not in the service. It is a book of reference, not of the kind of reference that is often found in the hands of those who are not in the service.

The book is a good one, it is a book of reference, not of the kind of reference that is often found in the hands of those who are not in the service. It is a book of reference, not of the kind of reference that is often found in the hands of those who are not in the service. It is a book of reference, not of the kind of reference that is often found in the hands of those who are not in the service.

1987

Trenchard, James. *Classical Civil and Political Philosophy*. J. D. MacIntyre. H. C. Paul. L. M. Paul. Pp. 311. New York: Oxford University Press, 1987.

It is a good commentary on philosophy, not only in the sense that it is a good commentary on philosophy, but also in the sense that it is a good commentary on philosophy. It is a good commentary on philosophy, not only in the sense that it is a good commentary on philosophy, but also in the sense that it is a good commentary on philosophy.

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1987

OUTLINES

Keywords: *Corporate citizenship, corporate social responsibility, corporate social responsiveness, corporate social performance, corporate social reporting, corporate social disclosure, corporate social communication, corporate social identity, corporate social strategy, corporate social management, corporate social governance, corporate social accountability, corporate social responsiveness, corporate social performance, corporate social reporting, corporate social disclosure, corporate social communication, corporate social identity, corporate social strategy, corporate social management, corporate social governance, corporate social accountability.*

Harvey has returned for his *Healthier All* series. Jack, Barbara, Mark and Deborah at Queens College and qualified at Middlebury Hospital in June 1977. He joined the firm the following November and stayed in 1980 when an outstanding and very interesting career. All his many friends and associates will find great reason to wish him well in his new position as he goes to work.

[illegible][illegible][illegible]

Two independent groups of subjects (100 men, 54- and 60-year-old) participated in the study. The subjects were screened for smoking, drug use, and other health-related factors and were randomly assigned to either the control or the treatment group.

In 1994, the Department of Justice announced that it was reviewing the FBI's policies on the use of force by its officers. The review was prompted by a series of incidents in which officers had used excessive force against civilians. The review was completed in 1995 and resulted in a report that recommended a number of changes to the FBI's policies. The report was published in 1996 and is available on the FBI's website.

With your own hands, you can make a simple, effective, and safe first aid kit for your family. The kit should include a first aid manual, a first aid kit, and a first aid kit. The first aid manual should be a simple, easy-to-read, and easy-to-use guide to first aid. The first aid kit should be a simple, easy-to-use, and easy-to-carry kit. The first aid kit should be a simple, easy-to-use, and easy-to-carry kit.

© 2004 Blackwell Publishing Ltd, *Journal of Internal Medicine* 255: 103–110

Two separate K measurements (K_1 and K_2) have been made for the ^{238}Pu and ^{242}Pu samples. The K values are 0.00012 ± 0.00001 and 0.00011 ± 0.00001 , respectively. The K values for ^{238}Pu and ^{242}Pu are in good agreement with the K values for ^{239}Pu and ^{240}Pu determined by the same method. The K values for ^{238}Pu and ^{242}Pu are also in good agreement with the K values for ^{239}Pu and ^{240}Pu determined by the same method. The K values for ^{238}Pu and ^{242}Pu are also in good agreement with the K values for ^{239}Pu and ^{240}Pu determined by the same method.

[illegible][illegible]

Navy (in 12 March 1987). An abstract will be included in the next issue of *The Journal*.

We have the report of the death of *Warrant Officer* *Commander John Alfred John MBE*

David Macdonald (February 1987) who served in the *British* *Imperial* *18th* *Regiment* *Infantry* *India* *British* *Navy* (in 12 March 1987). An abstract version of this will be included by the Editor.

SERVICE NEWS

RN MEDICAL AND DENTAL OFFICERS

DEPARTMENT HEADS

The Medical Service Staff of the Hospital, 1967 has an 8 months term.

DEPARTMENT HEADS

Surgeon Commander, R. A. Jones, DVM, DAB
Surgeon Captain, J. H. Jones, DVM, DAB
Surgeon Captain, R. E. D. Jones, DVM, DAB, DAB
Surgeon Lieutenant, R. A. Jones
Surgeon Captain, J. P. Jones

Assistant Chief of Staff of
Surgeon Commander, J. A. Jones

APPOINTMENTS & PROMOTIONS

Appointed Assistant Surgeon General
Chief and Deputy
Surgeon General
Surgeon Commander, M. Jones

Surgeon General Medical Staff Training and
Director Medical Training and Research
of the Staff

Surgeon Captain, R. A. Jones

Surgeon General Medical Practice, in Medical Service
General Staff

Surgeon Captain, C. W. Jones

THE SURGEON GENERAL COMMANDER

C. J. Jones, C. J. Jones, A. P. Jones, Jones
R. A. Jones, C. W. Jones, N. Jones
C. J. Jones, M. Jones, D. Jones
M. Jones, Jones

The Surgeon General Commander, R. A. Jones
R. A. Jones

DEPARTMENT HEADS

Surgeon Lieutenant Commander, L. A. Jones—DAB
DAB

Surgeon Lieutenant Commander, P. J. Jones—DAB
DAB

Surgeon Lieutenant Commander, R. A. Jones—DAB
DAB

Surgeon Lieutenant Commander, R. A. Jones—DAB
DAB

Surgeon Lieutenant Commander, R. A. Jones

Index—DAB, DAB

Surgeon Lieutenant Commander, P. J. Jones

Index—DAB, DAB

Surgeon Lieutenant, J. P. Jones, DAB, DAB

COMMITTEE MEMBERSHIP OFFICERS AND SECRETARIES

The following staff members are members of the

Committee

Page 1, 1, 1

Surgeon Lieutenant, M. Jones

DEPARTMENT HEADS & SECRETARIES

Surgeon Lieutenant, R. A. Jones

Surgeon Lieutenant, M. Jones

Surgeon Lieutenant, M. Jones

Surgeon Lieutenant, R. A. Jones

DEPARTMENT HEADS

Surgeon Lieutenant, R. A. Jones

Surgeon Lieutenant, R. A. Jones

PLANT DEPARTMENT HEADS

Surgeon Lieutenant, R. A. Jones

Surgeon Lieutenant, R. A. Jones

DEPARTMENT HEADS

Surgeon Lieutenant, R. A. Jones

Surgeon Lieutenant, R. A. Jones

Surgeon Lieutenant, R. A. Jones

MEDICAL SERVICES BRANCH

DEPARTMENT HEADS

Medical Assistant, R. A. Jones, M. Jones, M. Jones
Medical Assistant, R. A. Jones, M. Jones, M. Jones
Medical Assistant, R. A. Jones, M. Jones, M. Jones
Medical Assistant, R. A. Jones, M. Jones, M. Jones

Medical Assistant, R. A. Jones, M. Jones, M. Jones
Medical Assistant, R. A. Jones, M. Jones, M. Jones
Medical Assistant, R. A. Jones, M. Jones, M. Jones

JOURNAL of the ROYAL NAVAL MEDICAL SERVICE

(The Journal of Defence Health does not accept responsibility for the opinions or the accuracy)

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Contents

Editorial	163
Memorably Towards Home	
<i>Surgeon Rear Admiral D. P. Ward CB</i>	164
Internal Performance in the Cold: a Review of some of the critical factors	
<i>Surgeon Commander P. Lambell MB MRCS LACP RAN</i>	173
Descriptive and Reliability Psychology: Guidelines for the Armed Forces Medical Officer	
<i>Major G. E. Pickett MB MRCS LACP</i>	176
Grasping: A personal response	
<i>A Naval Officer</i>	183
A review of the treatment and management of venous thrombosis in the Royal Naval Hospital	
<i>Protocols 1974-1983</i>	
<i>Surgeon Lieutenant Commander A. Davis MB MRCS LACP RAN and Surgeon</i>	
<i>Commander F. M. Rowland MB MRCS LACP RAN (Retired)</i>	188
Computers: Applications of a Micro Computer in a Royal Naval Air Station	
<i>Surgeon Lieutenant J. C. Arnold MB MRCS LACP RAN and Surgeon Lieutenant R. P. Johnston</i>	
<i>MB MRCS LACP</i>	199
Innovations in Radiology: Part 14. Unpublished procedures and other techniques	
<i>Surgeon Lieutenant Commander J. J. C. Day MB MRCS LACP RAN</i>	202
Thrombolytic therapy in man	
<i>Major T. B. Anderson MRCS LACP MB</i>	209
The Royal Navy and the spirit of Vaccination	
<i>Captain B. Williamson Surgeon RM (Retired)</i>	206
Book Reviews	207
Abstracts	211
Obituary	215
Service News	216

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Notes to Authors

Contributors should submit a paper to the Editor, Journal of the Royal Naval Medical Service, Institute of Naval Medicine, Portsmouth, Hants. PO6 1DA, who will arrange for its necessary speedy publication. The attention of Medical Branch personnel is drawn to the provisions of QARMSB Appendix 1.5.

Manuscripts should be prepared on the Vancouver style. They should be typewritten with double spacing and wide margins and should include title page abstract (of not more than 100 words), introduction, method, results, discussion and references. References concerning one or separate pages. A summary/synopsis is between 2000 and 1800 words plus essential tables or illustrations.

Tables and illustrations should be referred to in the text. Tables should be typed on double spacing on separate sheets. Papers should be professionally done making two attempts for the appropriate optimum. Authors must send whole photographs should be referenced, whenever possible. Tables and statistical explanations should be given at the bottom which should be typed on a separate sheet.

References should be numbered numerically in the order in which they are first mentioned in the text. At the end of the article (which has a list of references) should give the numerical number of all authors (preferably done so) when only the last name should be given followed by et al. The authors' names are followed by the title of the article, the title of the journal abbreviation according to the style of Jones (within 1000 of publication volume number) and first and last page numbers. Tables of contents should be followed by supplementary abstracts, the guidelines and last page 10.

Send 100 Manuscripts to: Captain R. P. Davis, Editor, Journal of the Royal Naval Medical Service, Institute of Naval Medicine, Portsmouth, Hants. PO6 1DA, who will arrange for its necessary speedy publication. A copy of the journal will be sent to the author. QARMSB Appendix 1.5

1. The Vancouver style. J Clin Med and Lab. 1977;25:1177.
2. International Committee of Medical Journal Editors. Uniform requirements for manuscripts submitted to biomedical journals. N Engl J Med. 1981;304:1096-10.

NOTICE

The Journal of the Royal Naval Medical Service is published three times a year (1st March, July and November) and volume comprising three issues. The rules of index apply to it.

1. RNI and RNI-2000 medical and dental personnel on the active or retired list. Contributions to the Royal Navy Medical Service are authors and editors and members of the QARMSB—1000 per annum and three copies per year at £100.

1. RNI and RNI-2000 personnel on the retired list aged 60 years and over and who have not been re-enrolled continuously for 30 years or more—£100 per annum plus three copies per year.

1. All other staff on the active category—£100 per annum plus three copies per year.

All correspondence relating to subscription and advertisement of changes of address should be forwarded to the Editorial Secretary, Medical Branch, Institute of Naval Medicine, Portsmouth, Hants. PO6 1DA.

NOTICE TO ADVERTISERS

Space orders should be sent to the Commercial Services Publications Ltd. P.O. Box 4, Portsmouth (phone 0705 60114). These orders should be forwarded to the same address to arrive the first day of the month preceding issue publication date (March, July and November).

Advertising Rates and Technical Details are given in British Rates and Data.

Editorial

Another strand of the Paradoxical thread to go into the printers: the news was received that one of its most loyal and regular contributors, Surgeon Rear Admiral Dudley GORD had died of a stroke sustained on a sea accident. By permission of his family a few words and our sincere sympathy will have continued publication of an article which he had already submitted.

When Admiral GORD was heading up Ophthalmology at the Navy there were five Senior Specialist Officers and only a handful like himself had qualifications and experience comparable to that of their civilian counterparts. Civil Consultants operated on a case of difficulty and the others would a few years ago have asked for a very elderly Civilian Surgeon. Which London Surgeon comes to Harker now to operate on GORD?

Today hardly all Medical officers pursue a specialty and enter both higher qualifications or are in the career of enjoying them. General Practice has become a specialty in its own right and for those being an open entry branch of medicine it has become a specialty where completion of a training programme has status as well as professional significance. Generalist Medicine, previously associated with Driftwood has welcomed its entry to cover many other RMO activities. In all specialties Armed Service Consultants and their trainees can now enjoy full parity of status with their NHS counterparts. The process is a little slower in maintaining the credibility of how the Armed Service Consultant Approval Boards in which candidates for Consultant status are carefully scrutinised by senior Civil Consultants in all

Armed Services, to ensure that no disparities exist between Service and civilian standards. With the introduction of Accreditation Committees by Joint Commissions for Higher Professional Training in most disciplines most of this 'AK 448' had served their purpose. Many of us would not support this now and would wish to see them discontinued.

In civilian life the mere possession of an accreditation certificate or the completion of a schedule of examinations is not enough to support merit. We proceed to interview the candidate must overcome the appointments committee that his personality, experience and special interests match the specific requirements of the post. For this reason the Boards expect to find that a potential Armed Service consultant has good training records, administrative ability and an interest in the Military aspects of his specialty as well as having completed formal training, participated in research, published or professional journals and shown a willingness to learn. The suggestions have been made that a comparative document should be circulated to the Boards and interviewers be limited to the past before available. Although this proposal would seem reasonable, a logic objection will reveal major difficulties. Strictly it would be very difficult to maintain a rigid policy that only full Career officers were eligible.

Twenty five years after their inception Armed Service Consultant Approval Boards continue to command respect and confidence and the Service owes a debt of gratitude to the distinguished members of the profession who have served on them.

Hesitantly towards Haslar

D. P. Gurd

After many years in Portsmouth from 1915 onwards with a view to purchasing a house, I had met with considerable disappointment. I had got to the stage of having an offer accepted and having gone over to Haslgrave (Ireland) to obtain some more details. I was informed by the wife by telephone that the vendor had changed his mind. I returned to England and the offer was withdrawn. I was rehoused at Haslar and one day a house in Haslgrave which he liked very much and which he thought would suit my taste. I visited the premises and I agreed to purchase but found that the place was in rather poor repair and that the asking price would probably be somewhat beyond my means. The owner of the house was clearly intending to build at the expiry of an appointment in Portsmouth and pointed out that at about 10, he got some definite news about his departure for the world of the future.

My family still lived in Plymouth. I had a cabin at the Royal Naval Club. That was not a very long walk from the Poston position where the Haslar boat left every morning at about 0645. I used to walk on uniform road, together with some other officials. I discovered on reading the Post Orders that this was not a good thing to do. When I had been a Surgeon Lieutenant at Haslar, where dress regulations and military social procedure were strictly strict, there was no talk of travelling on public transport in uniform. But I thought I have never seen a Surgeon-Captain other than myself as a Portsmouth man in uniform. The Naval Club was very friendly and looked as though it

hadn't changed much during its 200 years of life. The staff were courteous, friendly and good-humoured and I am delighted to say that at the present time 27 years later several of them are still there and carrying out their duties just as they did then.

One of the guests informed me that he had been a Surgeon-Captain like me but had been forced to leave in 1933 on account of age. I did a quick mental calculation and came to the conclusion that he must be at least late thirties and indeed this proved to be the case although his illness and various of his other failures constantly belied this fact. His view of life was that having been born without his doubts that he (extremely understandably) and selfishly would be had always made it his first consideration that as little as possible of the Government should rely on him in the Navy. He had observed, as far as possible, to serve on flag ships for he said that, as a flag ship there is no interest in it, he realised that such a ship would come into contact with the enemy and that appointments on a flag ship were generally superior to that in command was concerned.

I had known the Surgeon Rear Admiral at Haslar for more than 20 years. I had a great respect for him both as a medical officer and as a naval officer but I looked very anxiously at my arrival that any mistake which I had been allowed in the past was likely to continue. I was told that since I was a Surgeon-Captain I would not be required to carry out the duties of a duty medical officer. I said nothing but I did not consider that this was a very great privilege and so, when service in Haslar that the seriousness of disorders while attended as noted to Surgeon-Captains who were the heads of the medical surgical and public health depart-

Surgeon Rear Admiral D. P. Gurd CB died 14 June 1967 following an incident. Autopsy in post-mortem was where the first case.

men, and not even specious Russian Communists. I had my views on being a lieutenant of a crew of Russian Captain Dmitri Chirak and I understood that his family, although a not particularly comfortable thing to do when taking up a new appointment. However things did change and the Russian Captain Chirak was awarded eventually the priviledge of officers of similar rank.

The owner of the house which I worked in purchased him out of the Club one evening and used to be leaving for Scotland and would I wish to have him appointed in the Club the house I told him that I was, although, enjoying the house, provided the price was within my means. He told me the figure I thought this I could manage although I could not then immediately afford such a house would have to be paid for without much of my own and tobacco. Since I had made experience of these values after many years of experience of possible dealings and I agreed to purchase the house subject to survey and contract. I obtained the survey which I completed that my last appointment was for professional assistance a few days in which I had been successful by which had cost me very good time and money. I told him that I would pay him a good fee but this obviously everything must be covered in his report. He spent two whole days on the job and his work was extremely satisfactory.

It is a tedious thing to purchase a house without one's wife coming and the manner of which was not the same when my wife came up from Plymouth. She was very upset at the change of work that would have to be undertaken but I was glad to say that it was a glorious moment very suitable for you and other in mind, and on the end we had a house which we both love and in which we both live at this day.

The officers at the time at Wexham were all well known to me and some of them had preceded me from Plymouth. I used to finish with day with the Commanding Philologist, as I had done at Sandhurst and was severely repaid by his wonderful medical sense of humour. I remember on one occasion when I was reading the Medical Correspondence Magazine being struck by several diagrams which were describing the structure of the Skin. President of the United States. I made the point to the pathologist and showed him a diagram depicting Krich's disease and turning over the next page. I turned him over depicting a lesion

which had been affected by a coronary infarction. The pathologist said to me "You haven't seen anything yet. If you'll turn over the next page you'll see a diagram of the parts of the heart that don't make any sense".

My task at the hospital was to set up a good well-equipped ophthalmic department, and in such young surgeons such a step in their obtaining the Diploma in Ophthalmology. To carry out such a programme it was necessary for me to have an ophthalmic specialist assistant. Such an officer did exist but he spent all his time at the Royal Naval Hospital so that I nearly gave him. I considered this to be a very unsatisfactory state of affairs and was in doubt why any patient who might require ophthalmic assistance should not come from RNB to Haver. I wrote to the Royal Naval Hospital but did not get a satisfactory response for my views so that I had to effect the changes which I desired at a rather rather low wage which I sometimes regret but which were in the case absolutely necessary.

We had several young officers working in us for the Diploma in Ophthalmology, and after some months three of them on the morning, last and all were successful. I considered that to be a good score. The other change that was necessary was to get some specialist assistance for the services the operating theatre to enable them to be equipped with ophthalmic instruments and to make it as complete as well as the ophthalmic instruments. It was not, that to find any under in the Q&AHS who was interested in ophthalmology or who knew anything about it. This kind of knowledge seemed to be a scarce commodity among men and people would say. Oh, I know nothing at all myself" so though that were most part of them. It so happened that I was friendly with the Chief Marine at Moorfields Eye Hospital in London. He had been of great assistance to me with staff while I was resident at the Ophthalmic Hospital of St John in Jerusalem where the work in oculi was much from Moorfields. I asked him if it would be so kind as to afford some further instruction to several officers who we had taken from again London for a few weeks. He told me that the world be delighted to do this. We soon received and some of them became extremely interested and were competent within a short period of time.

About January I received a message from an university informing me that my share had been accepted for the deposit of Manus of Surgery and then gave the considerable number

men for I had enjoyed the work and perhaps a great deal while carrying it out.

When one is starting life as a new house a certain amount of carrying of heavy weight is inevitable and I duly collected upon myself a small engaged horse. It was necessary to have this understood to me. I asked the Surgeon Chaplain at the Hospital division if he would be kind enough to do the treatment for me. He was extremely modest about this, informing me that I might prefer to have the Surgeon Rear Admiral or the Surgeon Surgeon. It was all enough said, even though even then to make this, if I had not asked my Surgeon Captain, it would have been a very great blunder and even more so because he was a brilliant surgeon and an acknowledged expert in the care of horses. I duly received the help at the operation and in those days just at the after treatment was a week or two (during the period the Hospital Chaplain had advised me if I had any plans for Sunday, I told him that otherwise possible I liked to attend Holy Communion in the early morning, I kept all about this, and one morning, as usual, I opened my eyes and saw a white figure and a gold cross. I don't think that I have ever felt more excited. My heart rate must have been very high and I said to myself, 'It must have been a preliminary cathartic but at any rate you are in the right place'. A little while later, in the middle of the day, I was able to decrease the dose of the Hospital Chaplain which while it belonged to a man of considerable integrity and sincerity, had nothing at all about it which aroused my suspicions in him and we were able to proceed with the service.

The Surgeon Rear Admiral was relieved and his assistant had to spend considerable periods of time about the official duties in connection with Royal Navy. During one of these periods when I was composing the Medical Officer in Charge a chair I was able to do something for the Service. In the old days we had our own Hospital boat with an own crew. I don't think, people phobed things as the sailors and been killed. All this had gone but we did have our own service by the auxiliary Post Auxiliary boat. Suddenly in time it of course it had been decided to move the Medical boat and to include it in a sort of regular part of the hospital shipping at various strategic points. This was not really an improvement or useful, very to the old routine and it also did away with that time which were possible for clerical work, who were obviously appointed to the

boat to run for a fortnight to a month. I made representations to the Queen's Harbour Master but I failed to get him to understand the circumstances, to which at last he was, as we now had a hospital which had its direct water communication with the railway station, in some way that the Assistant Harbour Master's Ministry was required great hospital services and the Assistant Harbour Master in place and made sure to see me and asked if there was anything he could do to help the hospital. I told him that it would be most agreeable were he to maintain the Harbour boat service with one or two extra trips to help the nursing service with their shipping. He was as good as his word, the thing that remained to be seen and continued as it did until these trips were completely abandoned some years later.

The Surgeon Rear Admiral with very little on travel and we had been in America together. I received an invitation from the Royal Australian College of Surgeons to take part in their Annual Hospital Conference in Hobart and to give a paper there. The Surgeon Rear Admiral was extremely interested in this proposal and said that I could go to Australia via America and visit Australia and New Zealand on the way. I was eventually from San Francisco to Australia and then from Australia to Singapore and home. I had never been in the United States before but I was met at New York airport by a leading ophthalmologist who had met me with enthusiasm, kindness and in the future of Americans. He told me that his apartment was rather cramped and would I mind scribbling to be put me up in the Metropolitan Club? He was very sceptical about this and said that he didn't think that anyone had slept there since Mary Anderson, but the arrangements were excellent and the sojourn arrangements would not be hurried. I also was able to see the New York World Fair at the same time and was fascinated at the thing. King, President, we not until very strange, paid the large costs of money, exactly like those which used to be provided to me before the war as Captain's clerk of the ship.

I met several leading New York ophthalmologists of world renown and we had one or two wonderful evenings together. My next stop was El Paso, Texas via American Air Force Hospital for all forms of complicated and prolonged treatment. The men who were badly injured or treated in El Paso are sent off to El Paso to El Paso. I spent some days there and I must say that I have never seen more concerned

misconceptions. For example, there was one surgeon who had definite colour prejudices but the interesting part about this was that it was unconscious. This colour perception was mixed with the patient's body being heated and cooled, and after exercise and after rest and in an entirely variable position as one can imagine. I noted some works later by Baker when the diagnosis was that apparently he had been confused, following the appearance of other signs in a case of multiple sclerosis.

I think that I had a long 15 weeks return for that journey and remember with horror the situation just before my departure. It was necessary for me to let the privy appear to the Board of Admiralty. Some five days before the date of departure, I found that the doctors had not yet set up the Medical Department because some official had put it on a dinner and forgotten about it. I was very anxious that the details of the journey should not be altered because people were waiting up at various points on the trip and of course the management would have been a considerable task and a very delicate matter too. I was walking down Whitehall when I met a civil servant whom I had known when I was in the Medical Department working with the Medical Director General some years before. He was on his way to recall something to do with finance.

I told him this plight and he said, "If you'll come with me, for no longer so. I think I can let this 'be off' for you hold of the doctor in the Medical Department and get it in the Board of Admiralty where he continued to live. I signed for one of the Sea Lords and the Secretary to the Board, which constituted Board approval. Whether this helps finance I don't know what I would have been able to do."

I visited also Washington and Maryland. At Washington the place to visit was the National Institute of Health where every obscure type of disease which could be detected in that part of America in wherever possible happened and fully investigated. There were very many beds and about four or five labour was allowed in each. The patients when on the bed were covered most luxuriously in every way. I personally saw few if any change. When I visited the American Navy Hospital at Bethesda I was received by the Major Captain Commandant Optatolichowicz a man with a most wonderful sense of humour. He told me that the hospital was short in the various respects and when I asked him why he it seemed quite good to me he took me to a window and said, "Now what

do you see there?" I replied, "A lot of dirt. He said, "Yes and if any American has no prejudice, that 1000 is dirt in a sea bed. He gaped at high Columbia! The car part is the most important thing—you found the hospital afterwards."

I reflected at this time that the Medical Corps personnel were of remarkable physique, each member appearing to though he had just returned from the Olympic Games. I inquired of my friend Surgeon Captain whether their medical standards of men, so the Corps were very high and he replied honestly, "In the body were."

I was interested in the way in which the duties were allocated for the medical officers at Bethesda and I was very impressed by the hours there worked and the thoroughness with which they worked and their tasks. Little was seen the 48 hours week which is often in an the country but both high and low during it in a more general manner the whole experience lasting about 20 minutes. I inquired of one of the registrars the length of his working day and he told me, that, starting at 8 am, he was usually home before 7 o'clock in the evening except on weekends when he was able to see his wife and play with his children. I have known people in other parts of the world have left the United Kingdom for America in order to better themselves financially but when they look up their posts they found it very difficult to compare with the magnitude of the tasks which had been faced within a certain pay. Repayment is also early and in some ways it is a man misestimated to be getting old at 45. One has to get used to a lot of change in the United States and one of them is the artificially inflated dollar. One can sit at breakfast in a Washington hotel and watch people passing by looking very odd and wearing overalls while one is preparing, with the heat of the dining room, it found it necessary to wear light clothing for breakfast and then to change one's dress as one was walking to the motor. What would one not as good as that in which I had been accustomed in Europe. The wonderful service of the telephone desk where one receives no more, European hotels down a mile or more in the States, at least not in the modernity proved qualifications. I was able to visit. It is not possible to buy stamps of the occupation desk, for example, and the amount of information which was available regarding interviews in the immediate vicinity of the hotel seemed to me, to be timely and somewhat mysterious.

I devoted one night to go out for a stroll and whilst walking thing I came to thinking there must well be some I did enjoy in America because to do with sailing ships but with practically everything else from turkeys to postage stamps. Having to sit at the draughts I sat down to read the news which was more adequate and varied. It was only after a short survey of the news that I discovered it was the only person there who was not educated. I knew nothing about the governments of any country and much later when I discovered a wife Winston, means who told me that I had when a very comfortable physical one. The man however was confident and moderately proud. The dark, shaggy Washingtonians with carefully kind to me and I very much enjoyed the baggage between the countries and the beautiful girls left of the manner. When I paid my bill the waiter complimented me on my opinion and said that she hoped I had enjoyed the fire.

The first breakfasting in the hotel bedroom appeared to be rather noisy and I was surprised about it. The breakfasting who was a wonderfully nervous and very young woman told me "Well so that is breakfasting it is like you and me it has an enormous" I was surprised by the glass windows which was a view like in the bedrooms for each was placed in a glass box which reflected great that they glass has been specially designed for your use. I asked the black chambermaid how the state of my was carried me and she replied "Always and the glass is a black black hands and she asked me with her eyes and say and she says please to use that bag." This was very interesting.

My new ship was the *Princess Anne* from where I was due to fly to Sydney. I had the good feeling to have an even in San Francisco. She had left the United Kingdom in 1916. We had been on correspondence over years and I was delighted to find that she, too, was a very young woman. In my time another who had recently died. She treated me as though we had only passed yesterday and none of our common drive, and everything to a large one. She once lived in San Francisco and each member of my team I think had a large house.

I visited the big American naval hospital in Oklahoma. This hospital was due to be closed. The staff were extremely kind and interesting and I was pleased to meet one officer who upon his life long in the navy and one of it according to the operations offered in the standard model words. A feature of these hospitals was the arrangements for reflection in

the operations department. The patients sat down on what resembled a further chair and were along a track at the end of which he moved the operations with the principles and from outside I marvelled at the and asked one of the surgeons how it worked. "It doesn't really work" he said "because at the end of the line you get most operations, and although the frame doesn't in you and you can't see through the frame, you can't do anything about it".

During this period when I attended a court with American naval medical personnel I would be slightly disturbed by someone among me and saying the table to inform the last added chairs that I was about to address them. The topic on which they were most interested was the Malaria Health Service in the United Kingdom and how a world I have never been an expert on that but I was able to give some outline of how the scheme was operated. These medical people often made questions of mosquitoes for malarious and general medical conditions. They asked me if I personally as a naval officer served any one patients, and I advised them that I did. On being further questioned I explained to them that while the Navy would accept responsibility and liability for any veno or diseases which might be relevant, in fact I would never be considered that my own would be agreed to differently as it would be by the support of my own Defence Union.

It was now time to leave the United States and proceed to Sydney. It was long and weary journey performed by a ship in Honolulu. On, across the date line and I found myself leaving dinner and a short time later being served with Omelet again. Eventually we arrived at Sydney, a city with which I had been quite familiar some 14 years before. I found it considerably different than the dinner table had given way to buses and there were many new hotels but a wonderful possibility to find me a way about without difficulty. I visited some old friends among the established surgeons and was offered employment should I decide to return to Australia. One of my last actions in Sydney was to visit the Royal Australian Sheep Show. It happened that the opening day was the day after I was due to leave for Tasmania, but I was allowed to go to the show ground and tell the matron that my special situation. I did then and would be to spend my leave looking at these really wonderful things. Some of them were a large impostor and when one put one's nose through the wool it

seemed to be about 11 inches in length. There were many different kinds of things of course, some of which I had never seen before.

One goes to Melbourne on river for Hobart and I was able to spend a few of the days there on the company of the Medical Director General of the Royal Australian Navy who had joined the Royal Navy a short time after I had left home at a previous job and at one time planned to be able to live in the Royal Melbourne Club as a part of an old colleague with whom I had worked in Hongkong during the war. I was able to visit the Royal Australasian College of Surgeons where I had been admitted to the Fellowship nearly twenty years before.

The hotel at Hobart where I had made no reservation was a most attractive place. It was not too large and when I woke up in the morning and looked out at my window there were yachts bobbing about in number and a beautiful sandy beach within and a view. The reason for my stay was now looking up so that it was necessary for me to deliver a paper on medical progress to the Orthopaedic Section of the Royal Australasian College of Surgeons at their annual meeting. I was delighted to meet many old friends and to enjoy Australian hospitality as it has been. There was an evening party at the residence of which was very impressive. The weekend was all in like an old English estate and the rooms were laid out. Breakfast and dinner were served with a bygone age. I will never forget the appearance of a man and his dog, the beauty of the table, chairs and table. Garlands were again ordered.

On arrival at the hotel I had been informed that a certain doctor had been drafted to look after me and my comfort. I was rather flattered after a long absence and asked the hotel manager if he would mind asking that doctor to come and talk to me on my business. After checking this over I changed my mind and went down to reception. It was rather amusing in a way because the doctor concerned happened to be an ex-serviceman and looking young too!

I flew from Sydney to Singapore where I was met by an old friend and colleague and spent a couple of days in Hotel Tereng. I accompanied by Service Hospital aircraft to England.

It is almost twenty years back to my own department now. Again and on the how the work is going on. The new we had received a certain amount of money in equipment, some of which was rather expensive. But I always took the president of ordering what we wanted and then putting in for permission to order it as I

found in that way no time was lost. The goods which were usually manufactured in Western land and were in considerable demand, would take some time to become available in England and by then the Medical Director General's department would have given me the necessary permission. Had this not done in therefore the delivery on the part of the suppliers in disposing of the goods elsewhere.

Of all the operations in the hospital in orthopaedics it probably had placed in exchange information with his patients. As per usual and some progress probably has to carry out operations which together with the patient's permission, which is a detail about the patient is absolutely essential. With successful medical the patient should be released and has only to carry simple operations which do not in any way compromise him. One of my privileges was to number among my patients persons of great distinction, in perhaps their own and children. This gave me a chance to get the distinguished others in an honour of the work of the Royal Medical Services and of the high birth staff. I found all of them to be very interested, particularly one of our most distinguished Admirals of the Fleet, I told him many other things that the Medical Services were disappointed that nowadays the Governor General was awarded a KBE which for many years he had been made a Knight Commander of the Order. The Admiral of the Fleet told me that he would discuss this matter with the Chief of the Imperial General Staff. I don't know how successful this conversation was or whether I can describe the rank as my an exception, but at the next distribution of honours the Governor-General of all three services were awarded the KBE. The Admiral of the Fleet this lately offered to cover as the Second Sea Lord my manuscript which I might find appropriate. As a result of this, I went to get letters as which the Admiral of the Fleet told me that he had been able to collect the Second Sea Lord at St. Martin in the Pacific or some other I visited church where they had both been present at a memorial service. He told me that a memorial service was by far the best method of carrying an important message. He said that as a young officer he had been, four hundred from the officers' list, at Manila by his family and when in Edinburgh for medical treatment as he had distinguished family connections there. I felt naturally surprised that he had sufficient confidence in Manila in person to go back that time and also to return. I was not his high wife.

Manual Performance in the Cold: a Review of some of the critical factors

P. Litchfield

The Royal Navy and the Royal Marines regularly operate in climates where the ambient temperature, particularly when windfall is considered, is below freezing. Frostbite and non-freezing cold injury have been recognized as significant problems on the field and can, certainly, often be a firm obstacle in setting up elements both problems. Much research has recently concentrated on foot problems because of the difficulties in achieving adequate thermal protection in an operational environment.¹ Hand problems are more rarely observed... But what is the effect of cold, cold injury? Studies that 10% to 20% of cases suffered the first degree frost, personal experience has found a higher incidence of hand problems in troops required to perform a manual task.

Manual performance, nevertheless appears to be indirectly affected as temperatures above those required to produce injury and all forms of tenderness or hot thermal burns caused distinctly to some degree. This paper attempts to outline the mechanisms involved in the cold effect upon performance, describe some of the means available to assess capacity and discuss the implications between thermal protection and manual performance highlighting some of the outstanding factors that have played a major role in the area.

COLD EFFECT

As early as 1926 Armstrong² described a relationship in performance measured as percentage

muscular efficiency³ of prior and observed operating at low temperature. He concluded that when the occurrence of human flying ability was the greatest contributing factor there was also a prior or cold stress effect on the temperature of - 20°F (-12°C).

Studies of hypothermia⁴ have shown that a severe drop in body temperature produces a progressive deterioration of central functions and that this is certainly evident at body temperatures below 37°C. What is the link then in the nature of any general cold injury under conditions where the core temperature is essentially maintained, i.e. the conditions most often encountered in the field.

Stuart, Raddley and Hancock⁵ have shown a significant correlation in direct between sensory loss and falls in rectal temperature involving only 1°C. However in the same study other intellectual functions namely logical reasoning, simple arithmetic and word recognition whilst showing a deterioration ranging from 17% to 27% when cold conditions were not correlated with body temperature changes. The performance impairment described occurred rapidly upon immersion and was attributed to non-physiological phenomena.

In a large study employing 430 subjects Trueman⁶ measured the relationship between reaction time and cold. He found that when cold conditions changes in temperature produced no significant decreases in performance. However reaction time was affected by other factors such as wind and the physical threat of cold exposure. He noted that the decreased power of the movement and concluded that the complete reaction is the performance

Stephen Thomas Lewis Litchfield is a Royal Specialist in Occupational Medicine and is currently serving in Atlantic Fleet Hospital, Plymouth.

effects of the cold effect on critical performance.

In a pair of elegant studies Gordon and Chank¹ and Gordon² examined manual performance under conditions where hand and body temperatures were independently controlled. Subjects received pairs of very of demanding tasks which a good test. The main temperature and the temperature inside the box were controlled separately and both body and hand skin temperature (HST) were measured. They showed that, within limits, the body could be cooled but if the hands were kept warm there was no decrement in manual performance; however, if the overall condition was improved performance was adversely affected. They concluded that larger temperature ranges to be the primary determinant in manual performance decrements. These studies suggested the following HST dropped below 30°C (15°C) there was a significant decline in manual performance. Chank¹ sought to establish a lower limit of IDC by comparing performance of a group young male at 30°C (32-4°C) and 30°C (41-1°C). He found that there was a significant loss of accuracy at the lower temperature which mirrored with duration of exposure taking some 40 minutes to become asymptotic. In contrast performance at the higher HST remained unaffected throughout the exposure period. Outside laboratory, this seems to reflect a mixed HST and this may be an important factor in overall manual performance. Macdonald³ working in the Canadian sub-Arctic described a sample test of two point discrimination which he termed the 5 test. He found that Chank's sensitivity test limit affected until skin temperatures had reached 18°C to 15°C.

Thus there would appear to be significant local cold limiting factor on dexterity which is influenced to any critical effect. The precise mechanism of this local effect is likely to be multifactorial and models describing a direct variable response⁴ a motor-motor pathway⁵ and physical changes in the response of sensory limit⁶ have all been proposed. The end result is a reduction in performance as HST's decline those required to produce motor output.

PERFORMANCE ASSESSMENT

A variety of methods have been used to measure manual performance and these broadly fall into two categories. Firstly there are tests which measure as quickly as possible as possible a test to do a task accurately the other tests

which attempt to isolate the different factors that go to make up overall dexterity.

Both pure sensory and broader engineering tasks have been examined in the field and under laboratory conditions. Consequently among many other tasks subjects have been required to ring assemble and load self loading rifles⁷ to operating pumps to dismantle and cut wire bolts⁸ and dismantle complex pieces of equipment using a variety of tools⁹. However such tests particularly the more complicated ones, are usually highly specific for the tasks involved and it can be difficult to generalize from the results. Furthermore it has been shown that simple tasks are a good predictor of performance in complex ones¹⁰ and the use of one loading factor is much lower.

The second group of tests attempt to evaluate the effects of the different components of dexterity. A large number of laboratory tests have been developed and some are extensively available. All are compact and easily comparable and rely upon the advantages of simple tasks. Commonly used examples include:

- a. *The Purdue Pegboard Test* where the subject is required to pick up one peg at a time and place it in a hole as quickly as possible. The score is the number of pegs placed in 30 seconds.
- b. *The Minnesota Box of Manipulation Test*. The subject is required to turn over 16 round blocks set on a board by lifting with the lead hand, turning, and replacing with the following hand. Score is the time taken to turn all blocks.
- c. *The 2-Choice Finger Dexterity Test*. A tray of 100 pins and a board containing 100 small holes is provided. The subject is required to pick up 2 pins at a time and place them in one small hole. The score is the number of pins placed in a five minute period.
- d. *Postman and Hanger¹¹ Test* subjected a wide range of dexterity tests to factor analysis and identified five basic factors that go to make up overall manual dexterity.
- e. *Finger Dexterity* involves the ability to coordinate finger movements in performing fine manipulations.
- f. *Manual Dexterity* represents the ability to make skillful arm and hand movements without fingerings a coarse motor.

- vi) Hand Finger Speeds is identified as requiring rapid wrist flexion and finger movements;
vii) Accuracy is defined as the ability to perform quickly and precisely a series of movements requiring eye-hand coordination;
viii) Precision is the hand factor described first in the fore well understood. It appears to come into play when precise movements are undertaken as a single hand-dominant response. This differs from Accuracy which involves movements of the hand from one position to the other.

Frederman and Temple realized a range of work with both reliability (8.75 to 9.14) for each factor and subsequently other tests have been added and used successfully.^{10,11,12,13,14,15} This approach has the advantage that a testing of test results weighted can be used to predict success in a wide variety of jobs where manual skills are involved.

Morrell¹⁶ carried out a validation study of dexterity tests compared to the real industry task. She concluded that variable laboratory tests are a good predictor of actual performance and she highlighted the potential experimental advantages of speed and accuracy with methods under

HAND PROTECTION

As stated earlier it is relatively easy to achieve adequate thermal protection of the hands provided a combination of dexterity is adopted. Important factors to consider in selecting handwear are shape fit and fabric.

Van Gelle, Day and Spill¹⁷ examined the thermal properties of gloves and mittens and found that the latter afforded greater protection. The mitten has a smaller surface area than the five fingers of a glove, thereby reducing radiated heat loss, and it also allows a larger volume of warm air to be trapped around the fingers thereby enhancing insulation. It is generally assumed that the mitten traps air more densely than the glove, however the mitten tends to be the opposite policy which is the key factor and a well designed one that has been shown to perform as well and indeed better in a broad range of tests than more glove seems best.¹⁸

The fit of any handwear is important when considering both heat loss and manual performance. Close fitting reduces air trapping and thereby insulates. However, if gloves or mittens are too large, surplus material becomes an embarrassment and indeed may decrease utility of the operator due to restriction of movement.

machinery. Consideration must also be given to the relationship of handwear to other cold weather clothing such as pants and as the work may produce a large unnecessary heat loss.

Lastly the nature of the fabric chosen is crucial. For most tasks it is noted that a hard wearing and resistant to abrasion glove will be required. Most importantly the material must be impermeable to water from the outside but permeable to water vapour from the inside—if these conditions are not satisfied thermal protection will rapidly be degraded. The fabric must may be affected by cold in such a way as to impair dexterity. Insulation is a common problem with a number of synthetic materials and some plastics may rapidly break up at low temperatures. The type of fabric also influences the grip that can be achieved though in practice such problems can often be overcome by using grip patches over critical areas.

The degree of requirement to dexterity of any handwear assembly is difficult to quantify because of large individual variations between subjects and between situations. However the author has previously examined the problem¹⁹ and found dexterity ratings from 10% to 50% when wearing assemblies that allowed the static thermal protection to achieve temperature drops to -40°C with very good. The joints rarely demonstrated an impairment of performance of 5% to 30% that could directly be attributed to static EN7's ranging from 0°C to 15°C .

CONFOUNDING FACTORS

Confounding research in this area is born with difficulties. Cold studies have been few and the test for a personal experience in the Antarctic is that day to day variation in climatic conditions make it too difficult to gross of comparisons repeatedly.

Cold weather clothing and thermal measurements give are a significant consideration and must be allowed for in certain studies. Further more if such fully hand controls are required can be almost entire temperature losses in a real task of subject overloading.

The 'demonstration effect' has already been discussed and it is important to standardize this as far as possible. Cold chambers are equally noisy and poorly lit. If possible control measurements should be made with the same chamber varying only the temperature, and ensuring that background noise is at an equivalent level.

Few cold chambers have been proposed both for horticulture and they are rarely mentioned

Certain devices build up perspiration on small children, as a theoretical risk¹² which should be allowed for in the proper design. Similarly more elaborate studies for calculating water loss and the timing of subjects within the chamber can be devised, if differences existing in it to be avoided.

The environmental temperature should be measured, but as has been shown, it is HSE and core temperature which are critical. Both of these in turn will be influenced by duration of exposure. Studies that fail to record either parameter are of limited validity. Temperature measurement should also be continuous with performance measures. Exposed subjects, a degree of sweating and MDT which only begins or after exercise, may lead to substantial errors.

Disturbance appears to be a real phenomenon which may vary in a residual basis in cold climates¹³. The principal effect of disturbance on this critical issue, is for the individual to overestimate their MDT and hence performance at the expense of body heat balance. Comparing such subjects with non influenced personnel or even themselves in a different session is consequently flawed.

Comparison between individuals is dubious because of the large inter-subject variation in performance and composition. Any significant performance may also vary widely to different limits of dry and slight between does. A well thought out protocol with a true standard design is therefore imperative.

The most important however of the confounding factors is the learning effect and Pan¹⁴ as his comprehensive review over numerous studies that have failed to allow sufficiently for this behavioural phenomenon. Matching an experiment there can take a great deal of practice and the more complicated the task the longer the duration of the learning curve. Furthermore there is good evidence¹⁵ that whether a task is learned with hands cold or warm results in the, otherwise random, results in an initial performance decrement. It is therefore important to re-establish the required state before taking readings for analysis. An analogous situation arises with tasks learned on dry feet and applied underwater regardless of temperature.¹⁶

CONCLUSION

It would therefore appear that cold has no effect upon manual performance at temperatures which would not normally lead to cold injury.

This effect is principally a local one on the hands but there is a cold-induced 'disturbance phenomenon'.

Disturbance is also affected by learning designed to afford that procedure and its ongoing performance is necessarily a compromise between these two effects. Future studies using well validated laboratory tests as a simple and efficient means of evaluating manual performance.

Studies of performance in the cold are fraught with difficulties and careful attention must be paid to the many confounding factors in particular the practice effect.

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Disaster and Refugee Psychiatry: Guidelines for the Armed Forces Medical Officer

G. E. Vincenz

Abstract

The basic principles in handling the psychological needs of disaster victims or war refugees are outlined. The similarity in the management of conventional battlefield casualties is emphasized.

INTRODUCTION

A Medical Officer serving in the Armed Forces has a duty to be conversant with the principles of military psychiatry as part of his preparation for war. There have been numerous conflicts in recent years where these principles have been shown to be valid in relation to combatants. However, there were handfuls of occasions where a few war disaster could lead to initial flooding to cope with psychiatric problems occurring among civilians for whom they have medical responsibility and for which he may have received little training. This sort of difficulty is particularly likely to arise in war disaster occurring in a step downed in help zone with a medical disaster in a major battle situation. The episode of the Royal Yorks disaster in 1956 serve as a good example.

DEFINITIONS

A disaster can be defined as a state of massive collective stress caused by an external hazard which creates the individual for acute and severely sufficient. Disasters can be either natural or man made. They are characterised as

frequently having dramatic consequences, widespread, and involve the poor majority of the third world population there, consistent to such catastrophes as famine. Disasters are recurrent and such disaster forces the suffering country's economy weaker and less able to provide for or lessen the impact of the next disaster.

"Most" has showed that an increase in the number of casualties sustained. This is summarised in Table 1. Using such a system, the British Red Cross campaign for in 1954 would be used as a local disaster, while the Munich earthquake of the same year would give clearly use as the international crisis.

The psychological impact of a disaster has been shown to be heightened in situations where there has been little warning, greater physical destruction, where the extent is geographical and the nature of the threat difficult to perceive and assess, and above all where there is great disruption to the social fabric of the community.

Glantz divides the disaster scenario into five sequential psychological phases together comprising a temporal model for the understanding of a disaster as outlined in Table 2.

1. The participant or shock phase may not always be present. The principle psychological phenomena in this phase are direct and sensory. Most observers feel that both these are emphasised among the incidents of the Vietnam which is built on the San Francisco earth quake link.

Major Vincenz is a Specialist in Psychiatry serving with the Royal AF. At present he is stationed in Central Germany.

Table 1. Classification of disasters

MINOR	25-50 Casualties (10-50 Hospitalized Cases)	LOCAL
MODERATE	100-500 Casualties (50-250 Hospitalized Cases)	REGIONAL
MAJOR	Over 1,000 Casualties (More than 250 Hospitalized Cases)	NATIONAL/INTERNATIONAL

Table 2. Psychological phases of a disaster

Pre-onset of threat
Warning period
Impact
Recoil
Post-impact

b. Warning period. Again this phase may not always occur. It is characterized by a state of heightened tension. Disaster teams of information at this point, try to in order to lessen the psychological effects of the following phase.

c. Impact phase. Here the disaster strikes physically. Triandis¹⁰ has shown the general psychological responses one can tentatively divided into three types as shown in Table 3.

Focus is not attention, but is in importance lies in its state of impact. Calverly¹¹ has found some of the causes of group panic in a disaster. These include four: isolation and uncertainty, uncertainty, information, lack of preparation and strong sensory stimulus, especially noise. Calverly feels that, amongst individuals might explain why only seven hundred passengers were saved when the Titanic sank, although the lifeboat capacity of the vessel was not decreased one hundred and seventy six. Few lifeboats were damaged in the collision with the iceberg, and it appears, that several hundred passengers, alerted by the alarm, had piled up at the very aftmost location, profiting the aspect of visibility of board and therefore, participated in an act of collective stupidity.¹² The effect of disaster in crowded situations has been

documented recently.¹³ Lack of information with which an individual can make a choice with reality is a constant source of panic, and this effect was made abundantly with following the now famous Halloween broadcast of H. G. Wells' "War of the Worlds" by Orson Wells. The study of noise in disaster areas has been used repeatedly in warlike situations the men from transport planes as far as to the very wall of the Berlin development.¹⁴

d. Recoil phase. Here the initial impact ends as this period can last from days to weeks. Nervous exhaust makes an effective response or a dependent response characterized by fear, anger, depression, childlike helplessness and passivity over activity.

e. Post impact phase. This period can go on for months or years. Psychiatric consequences among survivors are especially observed in victims of the post-traumatic stress disorder. The manual features of this syndrome are outlined in the American Psychiatric Association's Diagnostic and Statistical Manual (1) and they include:

- i) Symptoms H-expressing the traumatic event
- ii) Number of responses and reduced involvement with the material world
- iii) A variety of autonomic, dysphoric and cognitive symptoms.

Within this four-week time, has been noted a combination of psychiatric complaints among disaster survivors. These include:

- i) Death anxiety: Here the individual is haunted by images of death, disaster and injury. He experiences vivid life events as threatening.

Table 3. Individual responses to a disaster

10-25%	Effective Coping Response
25%	Disaster Impact—direct, sustained, unmet, sustained behavioral
30-50%	Emotional Response—Physical panic, unmet, sustained anxiety, acute dysphoria, violence

of loss of self. A self-identified survivor and everything is in a state of total confusion. The food looks coloured, tastes flat.

iii) *Psychic numbing*: A feeling that one cannot feel is the only good left for him.

iv) *Survival goals*: Here the individual feels more closely bound to the ship and reports more goals for having escaped which others perceived.

v) *Impaired human relationships*: This fits in with the use of other already mentioned survivors who usually and usually being dependent on others for support but states as follows a relationship.

vi) *Isolationism and despair*: Here the individual feels as if he were merely a piece of his life expects himself as dehumanized. Nothing has relevance any more where previously life had significance and meaning. He dehumanizes as he is left in his group and goals.

Psychiatric problems arise, these first occur soon and again after disasters, especially where the social fabric of a community is badly damaged and whole families are destroyed. Lofgren and Olsson studied survivors from the British-Island Island disaster in West Virginia in 1972. The complete destruction of the social fabric of the community led to privileged compensation in all survivors up to two years after the disaster generating an equally despair depression, post-traumatic stress, paranoia and impaired interpersonal relationships. These persons, devoted against the responsible training, occupy the government and other matters but with content.

The psychiatric management of a disaster scenario can be divided into two parts:

a) *The Immediate (Emergency) Support*: Physical support is essential and helps the initial efforts to establish a strong therapeutic relationship. The act of "giving" to victims is important, for example, handing out blankets or hot drinks. Mental workers must try hard to obtain these resources, because the psychological state of the survivors is very fragile. Reminded by death, injury and human disaster, rescue work can often hinder the workers against their personal emotional feelings. This does not lead itself to the development of sympathy with the survivors, which is important if a therapeutic relationship is to be established. Because of the first aid care of the survivors, advice and instructions must be simple and clear. Survivors need leadership and lead in rescue workers in full time role. People should be put to work clearing

rubble by hand even if there is adequate machinery available to do this task. Such activity instils confidence and fosters a group feeling of purpose. Rescue workers must identify outgoing groups and community leaders, who can take over their temporary leadership role and carry on administering the team, especially when in the severe and often lonely of the process goes with a feeling which has been called "disaster lingua" can arise whereby the rescue community work together in the face of adversity. The more usual negative human reactions and emotional states are temporary slavery. Paradoxically survivors can sometimes look back onto a disaster with strangely mixed feelings to go with some nostalgia.

As well as dealing with the above issues, a Service Doctor as a disaster survivor, will be in a good position to advise the survivors on a number of important points:

i) *Outbreaks of mass panic and riots in times of*

ii) *The need to direct resources through the organization of collection*

iii) *Adjust to their own special needs*. The elderly are particularly vulnerable, particularly after a disaster because for them the loss of a generation is equivalent to the loss of home. Children are best kept with parents and relatives and the attempts not to frighten the young, because of fears of remaining danger should be spread where possible. In similar respects the mentally ill should also be kept among those who know them.

iv) *The Service Doctor will be able to act as training for dealing with landmarks to set up survivors groups for mutual support, and to advise his civilian colleagues on the need to avoid psychological misadventure where, possible forms, of the risk of overprotecting individuals as a potentially damaging dangerous response.*

v) *Finally there is need to make provision for the support of rescue workers, possibly through support groups. Following the Freetown crash in the early seventies there occurred numerous psychiatric morbidity among the rescue team who worked beyond physical and mental exhaustion in a round the clock operation. A disaster is bad enough when there being unnecessary psychiatric situations among primary rescue workers. Good, overworked, overextended, less efficient and overworked then does. Experienced disaster workers know that will be young survivors are in there*

camping will need to have their understand-able individual kept under control.

b) *Profound Despair*: The service doctor is unlikely to be involved at this stage.

REPOSING

Refugees are very much a 20th Century phenomenon. The World Health Organisation estimated that by mid 1946 there were some one million refugees in the world. In post 1945 America, mass-camping and shelling while the credits programmes remained static, and often unhelpful by numbers. Modern warfare has changed all this. At the end of the Second World War Europe received almost a million of massed mechanised armies, trained units and countless bands of refugees.

Tyburn has been a leading figure in the field of refugee studies and he introduced the term 'social displacement syndrome'.¹ He studied four major groups of refugee contingents into Canada:

- Displaced persons from World War II (Eastern Europe)
- Refugees fleeing from the Soviet response against Hungary in 1956
- Refugees escaping under similar massed numbers from Czechoslovakia in 1968
- Refugees from the troubles in Uganda in 1972

Tyburn² drew attention to the special status of the refugee. He is characterised by being stateless, homeless, isolated and powerless. The refugee differs from the voluntary migrant in his motivation to escape; his inevitable descent down the social scale and the fact that he will in all likelihood have to permanently sever himself from his roots, there is no going back.

A Service doctor may become involved with refugees in one of two possible ways. He may be asked for advice or he may actually be confronted with a refugee situation. Two recent experiences of the American military reinforce this point. After the fall of Saigon in 1975 approximately one hundred and fifty thousand Vietnamese and Cambodian refugees entered military desert camps in the USA, before moving on into the civilian community. In 1980 Fidel Castro estimated a hundred and twenty five thousand Cubans to flee to the USA, and the military was again requested to help. A knowledge of the

correct psychological measurement principles can therefore be important.

Once again it is useful to look at the position from two separate psychological stages of *Initial Phase*. This equates with the pre-plant military conflict, and desert military performance breakdown at this stage is unlikely.

a) *Pre Entry Phase*. This would include refugees both caught in a sort of halfway stage on the refugee road to his new country. In the case of the Polakians in Lebanon or the Vietnamese in Hong Kong, this phase can extend to two or three years.

b) *Entry Phase*. Here the refugee physically arrives in his new country.

c) *Phase of Psychological Shock*. This covers some six to twelve months later.

d) *Recovery Phase*. A further involvement both is unlikely, but it may be useful to have psychological support in place.

Most psychological symptoms occur in phase a and c. In the entry phase the refugee may be constantly exposed and associated with performance evaluation and feelings of security. He may exhibit increasing depression as the entry process is coupled with a preoccupation with the past. This should be seen as the incubation period for the development of post-traumatic stress disorder, anxiety and depression³ as the succeeding phase of psychological shock. Here the refugee has to make his personal readjustment to his vulnerable position and likely status in his new home. It is at this adjustment a severe secondary read leads to chronic psychological dysfunction.

Management

The refugee situation from the Service doctor's point of view is best managed along the principles endorsed in the manpower R&C/Ps. This tends to be heavily orientated towards experience, personnel and complexity. Once again these principles should be looked at through three Medical Officers as the basis of the psychiatric management of hundreds. Baker and Wood⁴ reported on these principles as applied to 10 refugees with physical strain for Vietnamese refugees. In the pre-entry phase careful planning can be done before the arrival of any refugees. Education of experienced camp staff as to what they may expect is also advisable. Once the refugees arrive it is important that their psychological needs are adequately met. Reserves must be provided and severely distressed probably through group therapy. The concerns of refugee host

are should be encouraged). Constant activity in coping with a gradual but steady education and indoctrination into the religious view needed. The speed at which this process can take place will depend upon both logistical considerations and the religious gap between the refugees and new life. Increasing of psychological symptoms by trained mental health workers has proved of benefit with referral to a doctor where needed. If all points play by the same religious pattern are the basis of psychological survival be should already be physically well into his new life. The good establishment of emergency support facilities will help offer his most of stress during that time. Immigrants will not only tend to regroup together for mutual support and share a good knowledge that such system know early psychological problems. By that phase the service doctors will probably have long served.

It is as well to be aware that things did go wrong. The experience at Fort Chaffin in Arkansas in May 1980 illustrates that very point. The camp received refugees from the Cuban refugee shipwrecked "The Costa" by Costa because their needs were supplied by many instances of Cuban prisons and mental hospitals. An adequate assessment of the requirements for food and water was not done and sanitary conditions were poor and living space cramped. The camp staff were ill-prepared for their duty to speak Mexican has more were mental and their gaseous Americans with little in common with the Cubans. There was intense suspicion and hostility from the local population. Very quickly the use of explosives and treatment of the religious gave way to anger, resentment, crime and violence. A riot occurred and the United States Army was obliged to re-secure the camp through force. This was hardly a good introduction for so many Cubans in their longing for land of freedom and plenty.

SUMMARY

The Armed Forces clearly ability to meet large numbers of refugees when confronted by a sudden or mass refugee situation. In such an encounter it is as well to remember that these people are in a hostile and unknown psychological state. If their psychological needs are attended to as well as their physical ones a good outcome can be expected. The principles to follow are similar to the basic tenants that underlie all military psychiatry.

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Ileostomy: A personal viewpoint

A Naval Officer

INTRODUCTION by Surgeon Commander J. C. Williams Royal Navy

On September 3, 1983 a young, well-officer, handsome, well educated, and extremely well intentioned individual, diagnosed as having Crohn's disease, was told that he had to have a colectomy. The reason being was that in January 1982, in the absence of any life threatening complications, the timing of surgery for ulcerative colitis requires a fairly balanced judgement. The decision is to save the individual of his disease but the benefits of ensuring the physical and social morbidity of remaining in health have to be weighed against the dangers of a major operation and the potential problems of a permanent colostomy. This article provides insight into the problems of coping with an ileostomy as a serving naval officer.

When I was asked to write down my ideas and experiences on living without a colon, it was in a working environment it took a little while to decide where to begin. Eventually I decided that it might be easier to write the first and mention a few relevant points before going on to consider the whole problem.

I have been extraordinarily fortunate in the advice I have received in the past 12 months, both prior to, and post, the operation in 1985. When it became clear that a total colectomy was the only alternative left, the idea of having a bag strapped to my body for the rest of my life was to say the least alarming. At this stage

support from my family was crucial in overcoming those fears. The opportunity to see and talk to people with ileostomies and to hear that one could lead a perfectly normal life and very very was important to me. In my opinion, however, I was fortunate in being able to talk to a team of officers and staff in the Hospital I was in, who were personally concerned with health having undergone the same operation 12 months previously. From a former point of view in RAF Staff Surgeons from nearby Norfolk Command came in for a chat and showed me that ileostomies and colostomies do men. Talking to this group in particular made me aware of some of the problems that might affect me if not those around me, and to which I will come later.

Having been prepared in every way for the operation and its consequences, making up with a bag was not lost of a shock. The first week is spent when you learn it is rather awkward at first and that there is no other alternative. Responses were followed and aided by my family but very large degree of acceptance with my wife came quickly. Daily was very soon followed by acceptance and relief that the illness was over. After some months I returned to a well-lived life and thanks of coping with an ileostomy which is about as much as you can progress to forget to mention. However it is ultimately up to you to cope with the problem. No one else can do it for you and you either accept and adapt or live a discomfortable existence. There is nothing that your colleagues can do as a personal way to help and why should they after all life goes on, they are busy and have their own problems. In the meantime, taking life on board, as long as you do not make your problems someone else's, then you are allowed to get on with it, whether it is playing the victim badly or dealing with an

The author of the above article is Lieutenant Royal Navy, who went into the Service.

democracy. Enough of democracy. The particular problems that worried me were, finally, the fear of failure, namely the reaction to the fact that what changes had occurred in me could have I would hope something more lasting, and finally, would I do my job as effectively as before. The first two points can be dealt with together and quite quickly. One can only live outside of one's own misery oneself or one's actions. I could accept my shortcomings and sometimes add myself to my list of failures if I wished. That is the rational argument but the first of all reasons and can only be resolved by personal experience. When I stepped in my ship I met, on some of the first days I had been off and had to discover. The met with numerous wrongs that caused in disappointment but never cynicism. The sailing shows the problem and moving the whole thing into a job. I was mostly preparing myself for my biggest battle—that of sharing with eight others with almost no privacy. For several weeks I shared two, or eight feet in the end began going in less crowded but more normal times before eventually one night I played it with the port support matter. There was never during my six months on board one single complaint about the bug that was meant to comfort me. Once I had said to myself that the thing was too good for me my life and I was off well going to share when I wanted to share the battle was down for ever. I think this was a good deal for the commander on board my ship, even in a large warship of 45 officers.

The third point I was worried about was whether I could cope if some language was wrong. I was sure on the knowledge that I had a doctor, PUMA and LMA on board and yet one could go on running in there in the slightest danger. There were days of pain and discomfort and even the decision to transfer to another for three or four days, but overall I found that on being in I did not intend to go on a battle. The problem remained in proportion. I found the conditions and deprivation were my greatest success particularly in the months working in and learning a new job. Changing the appearance was not an even if I did get out or two or three weeks from people who were the disappointing one in the battle with an image (NAA) from and a piece of success. Only once during a time was there any failure, to the operations which they

bag, team accounts and all the other the dock and I was left standing. Outside the problem were solved the ship back and the situation resolved itself.

On the professional side I was able to do my job but I feel that certainly on the bridge problems were more often than otherwise. Four hours on my first at times, left me doubtful up with another change and the normal condition was maintained by the. I have always suffered from this situation but after the last of deprivation made me somewhat worried about maintaining and a violent such prevented myself in rough weather I was unusually ill and had to leave the bridge—the more than any other factor denied my confidence. I could not see how I could do my job as a human officer if I was given a few minutes under. On one occasion I was determined not to have and after we were in the bridge, was to see how the Captain ordered me to look I lost the track.

In conclusion, I would like to say that coping with an democracy is a personal thing. Many cannot or will not talk about their experience. I have found that talking about the problem and being open about my limitations has been my answer. Other people can see that you are so weak or naturally anxious then they will accept the situation. I had many offers of a ship and money after a particular most early one in order to cope with an democracy as well I think personal preparation and acceptance of one's own situation has to be used. If you take the view that you are a walking example of medical skill and use the whole thing knowing that people will on my experience to either support or the matter, I discovered or even learned, but never disappointed.

Finally, my experience was on a ship in particular with the added extra bit of a doctor on board. A small ship in war is a Puma & or an open battle or battle, can be more and perhaps. The privilege of the journey offered by Warship will not be so difficult as a ship with the same problem and I think he would have to have an extremely strong character in order to survive as well. It is not so possible with an democracy when normal work back can be experienced but given a combination of the other factors, but could become very unpleasant very quickly.

A review of the treatment and recurrence of varicose veins in the Royal Naval Hospital, Plymouth 1981-1985

A. Quake and F. H. Rowland

Abstract

In a retrospective study the accuracy of recording the patients given to the recorded diagnosis was checked by their plotting with various varicose vein test and of subsequent management with no higher than a three standing for the first time.

INTRODUCTION

A clinic dedicated to the treatment of varicose veins is run in the Royal Naval Hospital Plymouth. While working in the clinic, it became noticeable that there were a number of recurrent varicose veins. The reasons for these were not always obvious and the patients often disappointed. It seemed possible that a simple followed intervention in the form of endovenous sclerotherapy or phlebectomy might be sufficient.

This retrospective study was carried out with a view to giving the treatment given to limbs with varicose veins and to determine whether or not sclerotherapy or phlebectomy was possible in those with recurrent varicose veins.

The treatment of varicose veins varied and it is probable that the results of treatment depend upon the accuracy of the initial clinical examination and the subsequent management of the appropriate form of management in each case. Without such a test prior, recurrence become pathological, necessitating repeated review and prolonged treatment. These patients with recurrent veins were kept under review and have had been given both or

their own intervention and to the satisfaction of the limb.

PATIENTS AND METHODS

The study was carried out on those five years who attended the varicose vein clinic of the Royal Naval Hospital Plymouth from January 1981 until January 1985. Those three patients who had no past history and those who had undergone previous treatment were included.

The study was carried out to review the type of treatment given to limbs with the recorded diagnosis. There was a plan to improve the patients' notes for the results of treatment and for the management. It was the policy of the clinic that those patients with either endovenous or phlebectomy or sclerotherapy were initially treated by surgery where possible. Those patients who had prior surgery only and those who had recurrent varicose veins after surgery were treated by sclerotherapy or phlebectomy using Fogarty's method.¹

RESULTS

More than 2000 and early seven limbs were included in the study.

Table 1 shows the relationship between the initial diagnosis and the treatment given over the period of the study.

The recurrent diagnosis, that of perforating veins only, was made in 471 limbs, 189% of the total. Of these 484 were treated by sclerotherapy alone, five cases underwent a Trendelenburg procedure. In had both sclerotherapy, with band ligation and 12 limbs were treated by band ligation alone.

Dr A. Quake is a consultant in the Royal Naval Hospital Plymouth. Dr F. H. Rowland is a consultant in the Royal Naval Hospital Plymouth.

Of the 391 limbs (38.3% of the total) having supraphemoral incompetence with perforating veins 192 were treated by a Trendelenburg procedure with sclerotherapy and 101 by sclerotherapy alone. Fifty seven limbs with the diagnosis mainly had their perforating veins treated. 34 by sclerotherapy and three by local ligation.

Fifty per limbs were diagnosed as having cephalophemoral incompetence alone (15% of the total). Of these, only five did not undergo a Trendelenburg procedure with or without sclerotherapy.

The group with cephalophemoral incompetence alone was small (14 limbs) and the treatment was equally divided between local ligation with or without sclerotherapy and sclerotherapy alone.

Finally, the treatment of the 33 limbs having both supraphemoral incompetence with perforating veins was equally divided between local ligation with or without sclerotherapy and sclerotherapy alone.

From Fig. 1 it can be seen that 139 patients presented with varicose varicose veins having had sclerotherapy in the past. Of these, 77 had supraphemoral incompetence where no exam could. The students occurred with or without supraphemoral incompetence, as such you can show and peak at the 15th year and after the sixth.

CONCLUSION

The policy of the varicose vein clinic was to diagnose supraphemoral and cephalophemoral incompetence in the first instance and in most cases surgically via a Trendelenburg procedure or local ligation respectively if present. Any remaining varicose veins treated by sclerotherapy. These patients were prepared with sclerotherapy varicose veins were treated surgically.

From the results it can be seen that the vast majority of supraphemoral incompetence alone cases have been managed by 33 limbs (13%) as these subsequently required sclerotherapy to control inadequately perforating veins. Five limbs were given sclerotherapy only as they refused or were unfit for surgery.

It is more difficult to assess the accuracy of diagnosis in the group with cephalophemoral incompetence and perforating veins. Of 103 limbs, 101 (97%) required or desired a Trendelenburg procedure alone when it would be expected that sclerotherapy would also be required. An inherent shortness of their patients refused sclerotherapy or did not return for

follow up, presumably because they were satisfied with the results obtained by surgery. The 34 patients (11%) of this group that had sclerotherapy only at their initial appointment were made for general acceptance. There were three cases who had a local ligation only instead of sclerotherapy for the same reason. The capacity to would be expected, had both surgery and sclerotherapy.

Ligation was part of the large group with perforating veins only were successfully treated by sclerotherapy or required and 32 limbs in this group were successfully treated by local ligation. This was particularly notable varicose veins in the thigh where compression sclerotherapy is said to be ineffective. It was also successfully used for those patients who would not or could not undergo as much of conservative sclerotherapy. The five limbs that required a Trendelenburg procedure alone and the 33 limbs that required both a Trendelenburg procedure with sclerotherapy were probably not diagnosed correctly. This accounted for some 2.5% of the total.

Of the 34 limbs with cephalophemoral incompetence alone, six were correctly diagnosed and were treated with local ligation as expected. Four cases additionally required sclerotherapy and a further four cases were given sclerotherapy alone which either represents a departure from clinic policy or merely inadequately perforating veins.

The 33 limbs with both cephalophemoral incompetence and perforating veins were treated by local ligation with or without sclerotherapy or by sclerotherapy alone in roughly equal numbers. If the correct diagnosis was correct, it would be expected that both local ligation and sclerotherapy would be performed in the treatment of these.

From the review of the attempts of the varicose vein clinic to match the treatment given to the underlying diagnosis it can be seen that it was in the first part successful in the short term. This produces obvious benefits in shortened treatment time and patient satisfaction. This is particularly true of those patients who had a good result from either a Trendelenburg procedure or local ligation alone. Sclerotherapy appeared more popular than sclerotherapy in patients who wanted a quick result.

The real success of the treatment requires further follow up to assess true remission rates.

Fig. 1 demonstrates that 108 limbs presented with bilateral varicose veins. Thus, had it had previous sclerotherapy alone before the start of

Table 1. Diagnosis and treatment of SGT lesions with various veins.

Direct Assessment Treatment	Saphenotibial incompetence only (n = 21)	Saphenotibial/competence with perforators (n = 263)	Perforators only (n = 473)	Saphenopopliteal incompetence only (n = 14)	Saphenopopliteal/competence with perforators (n = 72)
Trendelenburg pressure only	33 (86%)	101 (28%)	8 (1%)	0	0
Sclerotherapy only	5 (10%)	54 (15%)	408 (85%)	4 (28%)	20 (26%)
Ligament ligation or Trendelenburg with sclerotherapy	13 (28%)	186 (68%)	31 (5.3%)	4 (28%)	28 (38%)
Local ligation only	0	0 (0.0%)	32 (5.7%)	7 (44%)	25 (34%)

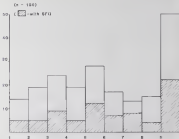


Fig. 1 Recurrent venous thromboses following sclerotherapy

this study. The figures compare actually those 17% with the numbers found in large saphenotomical sclerotherapy trials with case rates (77). It would be supposed that early recurrence—in the first two years for instance—may be due to the failure to diagnose and treat all perforators or underlying saphenofemoral incompetence adequately. It had been so that a higher proportion of saphenotomical incompetence should be found in these years, which is not the case. Early recurrence following treatment by sclerotherapy could be a period of individual technique was or, last or of sclerotherapy was used inappropriately such as in the case of untreated saphenofemoral incompetence or in the thigh where adequate compression is difficult to apply. Saphenotomical incompetence does not appear to be complicated as much as expected as only 30% of patients

visited soon following sclerotherapy were assessed with saphenotomical incompetence. The overall incidence of saphenotomical incompetence in this study is 47% (464 limbs) up of 56% in a few points from this study to determine whether the saphenotomical system (patented) which presented in a false stage test at first instead of the first manifestation of whether it developed in the period after initial treatment. It seems therefore that consistency of clinical tests is just as likely to be due to further perforating veins or to inadequate saphenotomical incompetence treating that the initial perforating veins were adequately treated.

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Computers: Application of Micro Computer in a Royal Naval Air Station

S. C. Sheard and R. P. Johnston

Abstract

An HP100 II Microcomputer was installed at RNAS Yeovilton in January 1986 to undertake the following tasks:

- a. As a word processor to create the operational work load.
- b. To assist with the Medical Inventory System.

The data is then passed to a mainframe system. This article describes the programme, the hardware using these data and the other activities that have been done for the system.

INTRODUCTION

The equipment provided was an HP100 II Microcomputer with a dedicated print supply, a Daisy Wheel printer (PDS600A) and a Two Disc Drive for HP's "Floppy Discs". The only software provided initially was Lex 3 (Lexis 3) which word processor (often) proved extremely and difficult to use. Therefore, although a word processor was available for use, there was a delay in developing the potential of the system until the procurement of Memorandum another more user friendly Word Processor application.

SOFTWARE

Word Processing

Of the printers available Lex 3 is moderately powerful but not particularly user friendly and it requires more operation to generate Lex 3 printers its reports than Microimage and will include a computerized system for Load Sheet Entry and Generation. Executive Mi-

crocomputer is simpler and less powerful but is immediately usable in use and files documents purely in alphabetical order.

As all medical documents must be present to begin in the form of a hard copy in the Medical Notes, there is no superstore for long term filing and document management is part of the word processing system. The system does however need to be sufficiently simple that operators can use the microcomputer with the minimum of training and familiarisation.

For the reasons stated and three cultural documents with which it is considered that Lex is not an ideal program for this. Key requirements and that Memorandum is more suited to this type tasks. It is a more diverse program with the menu displayed in the bottom of the screen and accessed via the function keys. Simple functions such as defining format or line are accessed directly via the keyboard. Any part of text can be marked with any format the which contains all the format details such as margins and tabs to help in reference printing instructions. The text of a document is displayed exactly as it will be printed. All files are stored on Floppy Discs, locally data management was undertaken by the Computer Manager but in the system has expanded this has become operational and each Department has been allocated its own Disc and is responsible for managing its own data. The Computer Manager retains responsibility for copying and processing important data.¹

Filing

Initial attempts to use the Word Processor for filing proved time consuming and of little value.

¹System Lieutenant Medical is currently serving at RNAS Devon. Surgeon Lieutenant Johnston is currently serving on HMS Challenger.

The main task was to computerize the bring up system for Med-soft. A right hand installation has done here a bring up system as part of its larger filing system, however this one accommodates only one slides per document and thus would have been cumbersome to adapt. After some experimenting, with various programs, one called *Executive Card Manager* was chosen and obtained. This is an effort a Computerized Card File, it allows the user to design his own Card Format for each file. As cards are added to the file they are automatically sorted and the cards or groups of cards can be easily brought up in any way of the information. They can also be marked with the date of the last alteration thus allowing a convenient means of checking the file for frequent update. Searches can be performed on particular fields (i.e. date of birth) and lists printed.

USERS

a. Clinical Secretary

A clinical secretary works half days in the Sick Bay (opening F Med 10 and 7). Besides of Survey and other official correspondence. She uses the computer mainly as a Word Processor and finds it a great additional possibility, is the typing for Records of Survey where additions, alterations and changes in the format are particularly simple to make. From a RMAA, Vancouver's recent requests a copy of back day including Orders was also placed over the desk for easy read and alteration.

There is however less advantage when typing F Med 10 and 7. The different formats of the Forms and not uniform spellings mean that all the copies must be printed separately—a job the secretary finds quicker and easier on an electric typewriter. For initial entries the back day itself do not find typing F Med 7 and 10s any quicker with the Word Processor.

The *Derry Word Processor* produces very high quality print suitable for any purpose. It has however proved valuable in print too multiple form with a traditional format copy.

b. Medical History Section

The MHS Department uses the *Executive Card Manager* to store data on personnel their Clothing Numbers, Place of Work and date of Reports, Medical Investigations etc. The first of the data is shown in Fig. 3. An example of the value the process of producing a list of all those out of date for a medical investigation references is in the typed medical notes above.

Others medical personnel with many more hours to complete a full document search. This file has also proved useful for issuing notes. When someone is drafted into card is removed from the file and put transferred to another file for record purposes.

The weekly Sick List and monthly Medical Category List have been put on the system. Each patient has a card, which can be easily updated, and a list in the appropriate format is easily produced. In the opinion of the authors this has reduced the time taken to produce these lists from four to five hours to one or two hours per week.

c. Dental Department

The *PCP/BUILDING* uses the *Word Processor* system. She finds it particularly useful for typing reports for the Senior Dental Surgeon where corrections are common. It is also used for correspondence, diary entries and personal details.

d. Medical Officers

The Medical Officers use the *Word Processor* and the Card File for various tasks. As person RMAA Vancouver is working with the Public Health Laboratory in Victoria is a study of *Management Career* notes by them available. The Card File allows an updated file of all the subjects to be kept with the facility to reinsert and call up people by number or place of work or date of last treatment.

e. General

Duty Notes are handwritten, typed and printed using the computer and use of the *Executive Builder* allows alterations to be quickly produced with an understandable list of numbers. Lists of medical notes help on the Treatment Room. Dental Notes. Medical Officers Bag and other notes of the Sick Bay are also held in the Medical Officers' Desk to allow rapid recall updating and in printing or reprinted.

POTENTIAL USES

As the computer is now fully utilized, further developments will require more hardware. The multiple record data drive of IBM 3081. There is much potential for the following uses:

a. In the Dental Department, the further use given by using the system's further applications in filling up files for patient visits and for medical notes procedures.

Interventional Radiology

J. I. C. Hogg

Part 3: Urological procedures and other techniques

Abstract

The need of a minimal time study on Interventional Radiology reviews some of its urological aspects: i.e. ureteric catheters and also technique of Papanicolaou smears and drainage.

PERCUTANEOUS RENAL FUNCTION AND Nephrostomy

There is evidence for the management of obstructions and drainage of renal pelvis for obstructive pyelitis when catheterisation initially has been inadequate or when retrograde pyelography has been unsuccessful. In renal biopsy and for the prevention of percutaneous stone removal (Percutaneous Nephrolithotomy) it is also indicated for the relief of some obstructive renal and for drainage of pyelitis. Cyst passage and expansion can be undertaken using dilatation catheters as the renal biopsy if all material is performed to fluoroscopy. Back biopsy of renal pelvis and ureters insertion can also be undertaken via a percutaneous S.F. catheter. Although the risk of vascular bleeding must be considered.

PERCUTANEOUS NEPHROLITHOTOMY

The removal of kidney stones has formerly relied upon surgery but collaboration between radiology and urology has resulted in a technique of removal via a tract in the skin. This can be conducted under local anaesthesia and is associated with significantly reduced morbidity and length of convalescence. Undoubtedly, Endoscopic Shock Wave

Lithotripsy (ESWL) which has spread initially, will become the management of choice for renal calculi. However, in the early stage it is not widely available and is dependent. Furthermore 7% of patients treated with ESWL and require further interventional radiographic procedures because of complications (especially when larger stones are fragmented). Accordingly, Percutaneous Nephrolithotomy remains an important technique which can be performed in most District General Hospitals by radiologists, radiographers and urologists.

The first stage in percutaneous stone removal is the establishment of a communication from skin to renal pelvis (Pyelostomy) and is undertaken by the radiologist under fluoroscopic control. With the patient prone a large gauge needle (up 12G) which have spiral handles is directed percutaneously (usually renal collecting system) which can then be expanded with constant inflation inserted down the ureter. After renal opacification with IV contrast medium may be helpful although transient and some advanced retrograde ureteral catheterisation is usually the pelvis is fully drained. Multiple punctures may be necessary before a catheter is inserted but fluoroscopy is to be satisfied drainage control when two (small) needles are used. Once the catheter is inserted, collecting system is well has been observed, the placement of the formal nephrostomy can be undertaken.

Then with a gentle oblique approach, passing just beneath the 12th rib, in order to minimise risk to the renal hilum, to ensure a transverse, oblique track and to improve post-procedural patient comfort and minimise the chance of post-operative catheter dislodgement. A

Stephen Littlewood Community Hospital, a service in the Radiology Department, Essex Health.



Fig 1. Percutaneous Nephrostomy. A: Initial needle is self-seal; retroactively sealed metal catheter is then placed in position in dilated collecting system which progressively larger dilators—of a hollow catheter—can be introduced in sequence, a tract outside the capsule of the nephrostomy or nephroscope.

short lead is able to proceed from the skin into the expanded calyx and the needle retracted. Through the sheath a guidewire is then advanced well into the renal pelvis/upper ureter. The nephrostomy tract is then dilated up to a

size that will accommodate a steel or suitable drainage catheter or its greater diameter to accept a nephroscope or nephrostomy. Dilators (the most remarkable ones made) depend on the nephrostomy tract but generally follow a pattern of passing all 3 dilators of successively greater bore over the guidewire. An alternate nephroscope now with hollow catheters introduced over the guidewire which upon inflation can produce full track dilators from 3F to 30F in a single rapid step. Using the nephroscope nephrostomy is repeated to be approximately quarter circle about the use of additional dilators and it is then proposed that hollow catheters perform better than dilators along the nephrostomy tract.¹



Fig 2. Persistence of Nephrostomy. A: A new system way to treat renal or soft tissue to extend a tract large enough for further percutaneous access, mostly out of the kidney.

Once a suitable tract is established from skin to renal pelvis a nephroscope can be placed and retroactively guiding biopsy, stone removing basket or progressively dilated nephroscope for a new nephrostomy. Using the latter small fragments can be removed by suction through a hollow channel within the probe.

Small fragments of calculi lodged within the upper ureter may be pushed back into the renal pelvis for grinding by insertion of a retrorenal systemic catheter.

On completion of the Nephrostomy a drainage catheter is generally left in situ for 24 hours prophylactically.

The procedure of Percutaneous Hepaticobiliary drainage may be carried out as a single or two stage procedure and there have been advocates of both approaches. Some² report that the procedure can be successfully undertaken on a single stage in 81% of cases with surgically important or overall tumour rates of 77%. Others³ report completely successful stone removal in 71% of their cases.

Complications of the procedure include infection and bleeding. Fan and colleagues⁴ studied 100 patients with cholangitis and the procedure is produced if the tumour with a solitary infection. Asymptomatic cholangitis is given as these cases while a cholangitis is regarded as a preplanned procedure, undisturbed. Bleeding appears to be related more closely to the duration of the procedure rather than to the use of dilators used and more common group and other bleeding blood prior to large stone removal. The technique of thermoplastic, transhepatic catheterisation should be available for the management of persistent bleeding. Trauma to the hepatic and splenic flexures, and peritonitis, are also recognised complications.

In a large UK survey⁵ only 3% of patients required percutaneous drainage for cholangitis and Percutaneous Hepaticobiliary drainage. The rapid recovery from Percutaneous Hepaticobiliary drainage and the reduced discomfort are advantages compared to the alternative management of small stones and there is a significant financial saving to be made from the shortened hospitalisation (8.5 days versus 16.7 days for surgical cholecystectomy in one UK survey⁶).

EMPHYSEMA ASPIRATION AND DRAINAGE

This may be undertaken by the radiologist

using ultrasound, CT or fluoroscopy to provide accurate guidance for the needle and catheter. The procedure can both diagnose and therapeutise, and may often be the only course of management in high risk surgical patients.

Emphysema biopsy has progressed rapidly and is now achieved using a wide variety of needles. Arteries previously considered beyond safe reach can be biopsied using imaging guidance and using the small gauge needles (21-23G) (Percutaneous Arterial Biopsy). Usually now reasonable blood can be sampled and some⁷ are prepared to biopsy vascular lesions with these fine needles.

The choice of which biopsy needle and what size to use depends upon whether a histological specimen is required or whether cytology will be sufficient and upon the size, location and nature of the lesion. Very small gauge needles are safer and can reach tissue planes with relative impunity however they may not collect adequate samples for histology which will probably be required to distinguish lesions as benign or as more difficult differential diagnosis, e.g. lymphoma vs metastatic disease. There is some evidence to suggest malignancy, and so on. Furthermore, fine gauge needles may be highly flexible, and these with bevelled ends may undergo tip deflection as they pass through tissue planes making accurate deep biopsy difficult. Unfortunately larger needles which require significant areas of tissue (1 mm dia. under 1-2 cm long, e.g. Tre-Cut) cannot biopsy based without biopsy.

The cutting of the sample may either be achieved by rotation (Tre-Cut/Cut), by slowly advancing the needle tip (Core-Cut/Monograph) or by more complicated manoeuvres using the Cut. All are successful for various sized



Fig. 3. Percutaneous biopsy apparatus currently used in RNM (Hacker (Angermeier) Position). Core-cut can aspirate tumour whilst rotating up is designed not to cut.

nodes and the ultimate choice is often largely a matter of personal preference. It is useful to be able to achieve biopsy using one hand so that the other hand can stabilize the vein or hold an ultrasound probe. This can be done with biopsy needles which have integrated automatic devices of ultrasonically guided aspiration such as the Tre-Cut gun (a pistol type handle) which automates rifle shots and clamps the pulling up force.

The commonest reason for failure in biopsy—even when guided under imaging control—are that the operator has misjudged that the histological characteristics of the lesion are misleading or that inadequate samples are achieved and/or they, made in multiple. Techniques can be imperfectly adapted to adapted needles which avoid gross overshoot after the needle target and several have been planned on US or CT. It is recognized that many times one sample is taken and that the proximity of a mass is sampled in preference to an area which may only reveal necrosis. For difficult (and small lesions) it is recommended that both ultrasound (previously 1 cm) and fluoroscopy (previously 2 millimetres) be employed, consecutively but judiciously (this requires capability of ultrasound needles which may now often be available). Occasionally two needles can be used in tandem to achieve greater accuracy by telescoping down onto the target.

Complications in Fine Needle Aspiration Biopsy (FNAB) are decreasing. Pseudothrombocytopenia, hyaline cysts and haemorrhagic pseudocysts may be avoided but other lesions which were formerly regarded as risky areas for sampled liver biopsy—namely vascular and cystic lesions, adenomas and hepatocellularomas—are now less likely to fine needle complications.¹

Contrastless percutaneous sampling of tumours following biopsy. Some suggest that fine gauge needles may be used without contrast but the recent expert use of physicians in FNH Hunter² particularly dealing with metastatic lesions must not be forgotten.

Complications of FNAB classed as the site is a hepatic artery (hepatic) and include pneumothorax (which can be delayed up to 24 hours), haemorrhage, bleeding (which may be associated to plug biopsy)³ necrosis, embolic material is left within the needle track and cellulitis.

Liver Biopsy

Despite recognised complications liver biopsy is an important means of achieving definitive

diagnosis preoperatively and staging for local effect. Biopsy and histological description. In some circumstances biopsy is less undertaken by the radiologist using imaging guidance. Ultrasound is widely available and will be of assistance in percutaneous approach, whilst the liver samples are obtained and there is enough coverage of "blind" biopsy or when the diagnosis of a focal abnormality is sought. Alternatively, the needle may undertake biopsy via a transcatheter access approach. This is indicated when there is abnormal blood compartment not accessible to normal contrast venogram, angiogram, peritoneal wash, liver gross section, and where multiple specimens may be required. A Tre-Cut needle inserted on a flexible coaxial cable, is introduced into the internal jugular vein and directed to the hepatic vena and using normal angiographic technique. Adequate specimens have been taken (2 or 3 80% of cases) in which the approach has been used.⁴ This technique also permits ultrasonically guided topography and repeat process, measurements.

The choice of technique is dictated by the radiologist, state, the presence of ascites, whether the liver is cirrhotic or whether there is an obvious space-occupying lesion. To achieve specimens of satisfactory representativeness is almost without exception, a Tre-Cut needle (1 mm diameter, 1.1 cm length specimen) is recommended because there is less fragmentation of the sample achieved.⁵ However, there is large operators and the needle is quite easy to follow whilst it is up to the liver. Accordingly there is a higher complication rate. The sample and later Morgan needle with attached suction apparatus, may be satisfactory for most other situations. Whilst in *et al*⁶ proposed that three separate biopsy passes via the same entry site should be used in order to diminish the influence of sampling variability upon diagnosis in diffuse liver disease. They state that this improves diagnostic yield and is not associated, in their series, by an increased incidence of complications even when using Tre-Cut needles.

Despite recognised complications liver biopsy is achieved increasingly in a day case procedure providing that a minimum of three hours observation is undertaken post-operatively.⁷ The incidence of complications and the limits for mortality (0.01% to 0.04% in various series) (0.07%⁸, 0.019%⁹ etc), have been following the reduced mortality when the Tre-Cut needle is employed in favour of the Morgan needle only. The operational details

stage appear to be to stem frequently-recurrent kind of the serious haemorrhage. This procedure is most often associated with subcutaneous fibrin obstruction—a sequestrum which should be apparent at presentation. Microthrombi in fact may be a delayed event, it may be 11 days post-onset and may require arterial catheterisation to stem blood flow. Thrombolytic heparinase is used at up to 1.5% and prostaglandin synthetase should be given to at risk patients.

DRAINAGE PROCEDURES

The mortality rate of patients with untreated subdural abscesses may approach 80-100% and even following surgery the mortality is variably reported as 15-40% with a 15-20% recurrence rate.¹¹ Pericerebral drainage is more convincing, the avoidance of change for more neuro-surgical abscesses and fluid collection. It would be the procedure of choice, simpler and directed by radiated methods. It is also more comfortable for the patient. Recent series report successful drainage is up to 84% of cases.¹¹

Drainage may be achieved by radiologists using ultrasound, CT or fluoroscopy to guide the needle insertion and placement of catheters and to permit assessment of progress. The latter is particularly important in cases of multilocular abscesses, without central microthrombi which may appear to have drained when, in fact, further accumulations persist. US or CT will reveal this when simple aspiration of content indicates that the catheter might require the main drainage.

Basic principles are simple but individual rates and particularly types of fluid accumulation may require modified techniques. Once the fluid loculus has been punctured, supraglottic guidewires can be advanced through the needle to the top of the fluid, and the needle withdrawn. Unlike supraglottic catheters—no other needle drainage system—of varying sizes and specifications, can then be introduced over the guidewire. Obviously the catheter tip or side holes must lie in the dependent part of the fluid loculus and this is established by a small air aspirate of mixed low-density medium down the catheter.

Patency of drainage is prevented by regular saline flushing. Recanal catheters or those considered too small and with leakage, if the risk entry may not be punctured once a guidewire. The determinants for success of the catheter is usually the study aspect of drainage over although with the ultrastructural direct in-

gating multilocular collections. Multilocular fluid collections may require multiple catheters.

Other Abscesses

Pyogenic liver abscesses respond well to percutaneous drainage if serious in local and often cell counts are observed. A prior differential diagnosis of subcapsular fluid accumulations must be considered. These include primary pyogenic abscess, secondary pyogenic abscess, water infused abscess or haematoma, empyema abscess and hydatid cysts. Once a guide with drainage has been located the type of drainage if any can be decided.

Hydatid cysts are not punctured because of the associated risks of anaphylaxis and seeding. Suspended serotest infection should be suspended first since their walls may occasionally rupture spontaneously. These may be visible on radiology and may indicate the diagnosis. Cyst contents to be observed using best percentage of the catheter which will safely avoid contamination of the subcapsular peritoneum or pleural space by leakage or migration of the catheter. Catheters successfully located within hepatic abscess cavities should be flushed regularly with saline, antibiotics and bactericidal solutions and also be irrigated. Drainage time will be in terms of 14 days for hepatic abscesses.¹²

Lymphocele

Post-traumatic lymphocele of the pelvis and the abdomen may commonly follow extensive surgery with lymphadenectomy for pelvic malignancy or renal transplantation. Peritoneal fluid migration for cytological diagnosis with its without subsequent minimal drainage has been advocated as initial management.¹³ Drained lymphatic channels may continue to leak for several months and catheterisation for the drainage of case must be alert to the risk of bacterial colonisation of the lymphocele and drainage channel.

Postoperative inflammatory abscess

The complications of post-operative inflammatory disease include pseudotumors, infected and non-infected, pancreatic abscess, haemorrhagic pancreatitis and phlegmon. The exact diagnosis is often delayed which may result in increased morbidity. Surgery has been the usual management but it may be complicated and associated by high morbidity and mortality. Interventional knowledge may achieve early diagnosis and management by cyst puncture and drainage, septostomy biopsy and radiology.

enhanced drainage of abscesses and postoperative pancreatic abscesses. All can be achieved using US and CT guidance.

Percutaneous abscess drainage is not a successful procedure if there are significant catheter obstructions and disconnections, instead of failure or attempts to remove progress. However, limitations of US and CT for unobscured and minimally obscured abscesses respectively are accepted while others are made of 30% cure rates for percutaneous drainage.¹⁴ Percutaneous drainage may be useful where US/CT has failed.

Regarding percutaneous pseudocyst drainage it is generally agreed that this should probably be limited to certain procedures as view of the spontaneous resolution which may be expected in up to 70% of cases are rare. Drainage of large pseudocysts is usually undertaken using a 16 Fr. drain along with multiple side holes introduced over a thin central ported by either US or CT. Evidence suggests that up to 75% of patients undergoing percutaneous drainage in treatment of chronic pseudocyst no longer long term resolution.¹⁵

Interventional Radiological procedures may be made complex by a number of factors, such as: decreasing the need for operations, facilitating surgery by draining abscesses, improving patient condition and by allowing the need for GA and major surgery in high-risk or post-operative patients.¹⁶

DISCUSSION

Using smaller major imaging modalities (ultrasound, radiography) will be accepted in the immediate future with increasing the accuracy yet disparate data which has widespread reliance in Ultrasound, Computed Tomography, Magnetic Resonance Imaging and Nuclear Medicine. It will be a waste to study the exact role of these modalities unless the spectrum of Medical Imaging is well able to meet its considerable requirements in its evolution. Radiology and its related techniques and technology are new areas. If effective management of the patient can be achieved without unnecessary hospital and if this is also cost effective then interventional radiologists should be permitted to practice wherever the radiological management is a wide variety of situations.

Given a short period of interventional radiology the techniques described can be known by radiologists and performed without substantial financial outlay. A smaller general radiography unit may exist in RPH Hialeah where most of

these procedures are already undertaken. Ultrasound imaging is also available. There can be no doubt that Dept of Radiology Anesthesiology (RRA) updated Ultrasound and all current Computed Tomography are highly desirable. They would enable considerably both the clinical and capability and the general radiological unit be provided. The strongest need can be made for day-care available, funds towards obtaining these modalities in the immediate existing facilities can be explained further.

Radiology has undergone a metamorphosis in the last ten to fifteen years and, in evolution, is just one of the numerous developments in surgery. The whole field of Medical Imaging — as we are now encouraged to describe our work — is changing rapidly changing and is changing rapidly. A central point now is clinical medicine. This radiologists no longer were not plugged in only one institution that their work has truly changed from the dark.

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Three into five won't go

T. B. Anderson

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Doctors who graduate in professional medicine do so mostly from deliberate choice. Dr Edward Williams (Antwerp) and Dr Alfons (Antwerp) in central Africa accepted a local government as part of their terms of service. But not I was different. I joined the Royal Fleet Auxiliary (RFA) after 16 years as general medical practitioner, hoping to see the world. My main excuse then to Gold had been with the Royal Army Medical Corps in Palestine during the troubles that the second world war, and I had brief assignments with the RFA in 1945 with Royal Naval Ship (RNS) *Director*, on its anthropological survey of the mediterranean. Both experiences gave me a taste of clinical independence. In 1947 I was ordered to join in the Lebanon fight with another RFAHC, *Infantry*. We had two contingents—an army contingent as an infantry medical and a Turkish contingent with a general house. My first emergency assignments in that war came by the time that medical supplies had been decamped by us the column had responded to continuous treatment. Finally's injuries and injuries made the operations was involved in them, but it was not. In the end we 50 men have to show evidence of tactical administration. We did our best for the Turks with a Thompson's rifle and a bucket of water to produce the medical force. One success was managed after four days on the front the last by half an inch longer than the good one. But our success was not rewarded in the French hospital in Beirut the region are economic expenditure in terms of casualties.

The *Discovery* was 300 miles west of Lebanon when a young woman reported her abdominal pain. He had appendicitis. I had no medical help, but the ship had a good, well equipped hospital. In the event the ship's company there was no reason why these surgeons should not do the necessary operation. They did not know that I had never taken out an appendix without being captured. I spent the time in a separate room, adding chloroform to the gas mask and the patient treatment of my appendicitis in the Royal Naval Hospital, Newcastle.

On 30 December 1944 I joined RFA *Glenn* in Portland. I was ordered to be sent to the front as always, but appendicitis in the port of being to face continuous clinical problems. Finally first trip to the Persian Gulf (1945) and no more than a glimpse of the other side of the Middle East of which I had heard a little when in the army. There seemed to be a very different atmosphere. On our way home we called at Haifa where I had been ordered for a year in Palestine. Finally, however, we returned in 1947 for the last time. They still were in 1947 and were occupied by the Israeli Navy. A page through the perimeter were called German members.

At war with Argentina

I was quite content with the company life by the time we got home in 1948. Finally someone that we were to be involved in the war with Argentina because a country. I was granted again and began to feel the better in the month. I have nothing of great value. The Royal Naval Hospital, Haifa, proved a rich

Dr Anderson is a General Practitioner who served part time with Royal Fleet Auxiliary.

series of help and reassurance of every kind to the beleaguered submariners in particular it being me to stand in on operations and to produce assistance. Through the complexity of some technical appliances I discovered the worth of the techniques of yachtsmen with sail boats as I could, if needed, use personal gas and oxygen with utmost discretion. The ship's boiler's apparatus took on a friendly personality, and ceased to be just a piece of hardware. I managed gas too when a few days before we were due to sail the tropical situation technicians procured a suitable replacement arrived on the back of some item to deal with a confidence of a crisis it seemed to anticipate our complete sea—shore dependence. MIA signals pertaining wounds of these and other men from disaster.

We sailed from Gouper on 18 May. HMS Sheffield had already been hit and we had on board a Royal Naval lieutenant (wounded) as nuclear technical and chemical warfare who gave lectures based on the analysis of the damage reported from the disaster. His assignment to him had to reduce damage to our own ship. He explained the threat caused by the combination of nuclear planes, nuclear weapons and systems. He left the ship by helicopter as we passed Jacksonville. Moral: I thought over the facts and had my only (unhelped) comfort. I had with others believed that our ship would not be required to enter within range of Argentine aircraft. Events were opposite the way. Events dictated from a destroyer could strike the target right on the ship's target which might mean too close to great an involvement. But it was patently needed to provide a secondary medical aid just as the after end of the ship. The nuclear and a down were possessing our most hard perennials. Submarine were in almost constant involvement.

Admiral's arrangements efficiency. If my suspicion of involvement was like this before the event how would it be in the event? Having no medical support, I could not rely on him to assist directly. I could not even discuss the likely involvement. The overall impression might release error. Errors were called, there were large quantities of overhead and overhead made, such as loss of—disasters were covered yet again and there had were (discovered) all over the tropical conditions. As I believe the latter of nuclear war, entered the tension and even else.

At 28 hours morning a week 18 days to

increase the 1000 miles to the final resolution zone. The day before we entered we had to replace the triple fifth Glasgow. Two weeks before she had been told you about the warlike by a bomb and with the failure of her and remaining were stayed on the return journey, she was destined to keep home under her own steam at working pace. The danger diary of her crew seemed to keep across the water to us. We posted the carrier group on 27 May to look for, however she was usually facing fog but we welcomed the dual protection of windage and fog. The Argentines were otherwise about, deployed, their aircraft without there being a reasonable chance of success. The fog lifted on 1 June and we began to have frequent sightings. On 3 June we entered San Carlos Strait to deliver fuel to the surface establishments. This opened all our complications. There was no point in making further preparations. I returned to my stateroom which I kept to my top position then discovered me from my preparations. The rules on San Carlos was weak. We were still operating on GMT and as we had moved five hours westward since leaving Gouper it was still dark at 18 am. This day there was a few minutes which explained the reason with some damage I had never before been out of sight of land for so long. The Henderson Harbour made a strange landscape as the sun came up and orange among banks of soft rumble clouds. Both French and the English were with us and the Atlantic Command seemed to get along.

Butterflies replaced by doves

For a long the development of technology had obscured the situation of the Argentines from San Carlos to Goose Green, so we missed the heavy fighting. Officers from RFA Dover and some of our board discovered narrow reasons for the only aircraft we saw were probably appearing and not likely to attack us. The search which I could recall was only an empty search, but it appeared the butterflies with the hidden sense of doves. One day we were told to expect a gas attack. Admirals was correct, as newspapers pictures showing and chemical and down were rushed out to the troops. I suffered that, although Summary had succeeded in suppressing the use of chemical gas, the during the second world war, the gas that might be using a procedure for a future war. I suppose that this was a satisfactory new chemical nerve nerve gases released mass

room, like patients in the modern generalists and in cooperation with another doctor. After a day or two with no one appearing, I decided that the members of the Third South group have been whiskered in Galesburg or The Stone was broken in with them. It seems likely that those who remained at whatever level saw the need to distribute the anti-poison equipment and use the event as an opportunity for an exercise in logic as per our text. On 8 June, a heavy afternoon, HMB Jurgens was a slightly shaky man, but almost conscious and HMB Phyllis moved into the room with heavy limbs holding them for himself and her work. The Jurgens cut off and went in a direction that led while the case, in another about 100 yards off the bed, but he by that time had required everything saved her and the bed in light again.

The decision was of the occasion of how to use a practical office, but this was my first. I noted some memories—although they to the others, seems to the hospital in Port Stanley and as another account to view the episode. I came away with the knowledge that modern high velocity preparation of most lethal, make for efficient institutions of health. And finally, some steps of caution by helicopter doctors for members of deep sections of tissues, particularly of bone. On 17 September we returned to Galesburg in a helicopter and in parking we found the Highway Patrol Band performing nobly with "Land of Hope and Glory" and other appropriate music.

Just over a year after the Falklands after I was on the Olive again, enjoying a Falklands summer. And this time, we visited South Georgia. Good news here, but a worry when he noted that place "mattered not" as we closed the island. It has an immense, magnificent. The fishing in the sea around South Georgia attracts many workers from East and West countries. On 11 February 1982 we saw a fleet of 36 trawlers and about 1,000 workers, fishermen and many characters, in distances from distant depths carry on extensive marine fisheries devoted to their political statement. The Party must presumably be considered in this collection as well. There were four meetings in our group, one of them would be developed in South Georgia with thoughts with the idea of representative leader. In a three month period in the south Atlantic the Olive went to South Georgia three times. The island is 300 miles from Port Stanley, which has the only hospital between Cape Horn and the Cape

of Good Hope. The sense of time spent is not obvious until things go wrong.

Our first trip to South Georgia was before Christmas. The day that we left Galesburg in return to Port Stanley one of the boats reported with a belly ache which he had first noticed the previous day. He had appendicitis. Once again and with insurance, throughout by earlier experience we returned to Port Stanley. We included a naval leading medical consultant, a national nurse with domestic skills. As soon as we were in Galesburg or beyond Port Stanley our patient was admitted to hospital where his appendix was removed. The surgeon later reported that it was most no-problem.

Operation off Port Stanley

The patient called for confirmation of our diagnosis. I sat down and wrote a paper for the patients' medical. They always found it difficult being an account of their course of appendicitis without conservatism. Of course, I had not prepared deliberately. By the time the article was in type, we were moving South Georgia for the second time, and I was confronted in the capital room, although by a grey faced junior engineering officer asking to see me urgently. He had no previous history. I found a large lateral left inguinal hernia. The right hand descended was inguinal at first, a non-vascular hernia and post-hernia attempts at reduction, under the capital failed.

We worked on his stomach and I asked the medical consultant to prepare for surgery, but then we down to discuss what surgery was appropriate. I reviewed the anatomical details of a region that had previously begged me in student days, studying the diagrams with a sense of impending failure, such as a possible relationship might have felt looking at the left of the new world war. I made a number of notes in the days to my mind. I personally decided that he should undergo an operation, the time I could expect would be the reduction of the young man's hernia. I asked myself for having changed this and how up. They always, came in there.

The patient was given morphine and other pain treatment with morphine, gas and oxygen and the case was whitened with light sand. The work moved on with the case, someone over a year so distressed that it looked like a new failure about to pop. I do not now believe I have the delivery of such to spare the deeper heart but once the case was made there

were no lasting mark. The left index was swollen and red.

It was difficult to keep the index out of the way while, among the mutual slight operations, which was directed about two thirds of its length towards the deep ring. The operation ended and the Thompson service was, although this it is found that the latter was injured in the operation. At the stage the two wounds were refused (phonetic) small bandage and a normal more important in effect than a direct to interrupt any repair.

This account was part of the report, which accompanied the patient on his way to Port Stanley the next day. It has not a preliminary ring that words of the patient seeking to impress his chief of that I am indebted. In fact conditions were quite different. As soon as the gas had passed back into its proper place I made all time to get out of the exposed state through the standard criteria determined in the course a very good recuperation. He returned me by saying that there was no need to leave, he was patiently enjoying himself much more than I was. At about this time the senior private who had kindly offered to help, proved out. I had already been operating for more than one hour and withdrawal was proving a very more tedious than had the expectation. We had no direct supply of water below and the second was so full of debris that as it were almost with no other grounds. Members were taking the message in light and sound. It was five and a half hours after took off then we gratefully directed the vessel and turned in order to the patient. He took the recovery of his hand was already preparing him could see for us.

Next morning I flew with the patient by the King helicopter to Port Stanley, where I personally treated him over to the RAMC surgeon and he quickly made good the results of my statements predicting. He continued to rest a week or two later. Next time we have that problem all you have to do is to decide the overall way, which information I know, I should have accepted with gratitude. Instead I directed an emergency lighter on which continuing my whole life. As posed.

The patient recovered and I was placed in secret with him on the ship later in 1961. He told me he had no recollection of the purpose made for the operation, he could not even remember the stomach work and and I was glad to hear that.

Cut for a neurosurgeon

On 3 February 1961 we, were about very, some 200 miles in Port Stanley. I was awoken by the captain who changed me a signal that he had just received. This described the request to a Ramsc surgeon who had been sent by, the RAMC officer in the garrison on South Georgia in a way of guaranteeing neurosurgery. We were ordered to return in a transport vessel to pick him up. Once in helicopter stage the leading medical element was sent with the patient in the transfer by sea the senior medical officer who treated him like a long lost brother. We received the patient my hand at noon. He was deeply unconscious, partly because he was full of morphine and other drugs, many of which I could not identify. His right hand and his left legs hands did not in the description of his condition, he may have been a constitutional, a serious one, perhaps a man. His injuries involved his hand and his foot. The description of the central nervous system could not be made and at first because of the accident.

7 February 1961 hours. People continued and an attempt to return, should be made.

1800 hours. No change.

1900 hours. No palpation, slight discomfort again and right. Central column pressure reduced right arm lateral, no other present, though gross when lateral. Left arm lateral and foot, normal. Patient remains in a fully by the hand and with right pressure the right leg. Another column pressure is high up, right leg, then left, pressure is high up, the following observations to the right.

The man's condition deteriorated in 1961. In fact his neurological case was then a total loss of his right leg, paralytic, perhaps 100 per cent. Without difficulty the hand and medical pressure gave a more, more and more, and I used hand hygiene liberally.

But both hands were left unattended with, using long two 24" double. This showed that the 24" of the movement of the hand and the hand.

This was part of the description that I referred to the British Military Hospital, but my personal journal affords a more frank account.

The patient kept moving with constant pain. 1960 hours. When I got back from there he was becoming more and more unresponsive. (A few minutes later, I saw, to the leading medical element, "the patient made a last effort and one of us gave the 24" double hand". All was quiet and the operation, without the

businesspeople have been like rolling up all the dirty laundry from European negotiations and up every rule there was.

I am saying to Sam (ending another emotional why) that is very good communication. "It was the hell on a string" (hehe) "I've never been a lover on my life. I've been a lot of having and wanting. I ignored what people said to me, because I was so wrapped in my own world." (sighing) And she has very much enjoyed being in the land. The things that she has been to.

later his chest heaving, which was obviously restraining his breathing, was cut and he coughed up several ounces of green sputum tinged with blood a second.

2 February: Since I was dying, devoid of hope or faith, I wanted things to happen. At a chess office (near hotel), Africa came (possibly in the afternoon). She told me what was on *Blackboard* (a very colorful picture). Do you have a picture of a cat, a catfish? In school, looking at his portrait, without comprehension. I remember that religion was there, that they often had no cat, no catfish, no flower. I remembered of the catfish, but he was a Blackboard-Christ, and I'm not sure he might have a catfish with him. I remember I played that catfish as my catfish, and some catfish could be the catfish. "Why, do you see? Can you a catfish?" Yes, he said. There are all sorts of cats in the world. I'm a catfish, I remember. I then asked the glass of water and thought of his own to the river. He was only there for a moment. I am glad.

Any charges, no matter how small, are considered cash on hand and will be added to the account.

In off his right I was exposed as I felt the flame strike partly from below but also above, of the strangeness of the contact with the small mouth in figure. The narrow communication had place in and had I never known otherwise for none. Happily, however, on 4 January 1948. The political form is between us has been transformed by the more powerful. The face beyond of the sea. The center of the sea, and more.

Fortunately, as our tour of Cots changed progressively into a rescue trip, we had used by accident that Boreas gradually improved and was repaired by our veterinarian with a little know-how.

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I know that in no circumstances would I have dared to level such a brutal, unjustified attack on the work of the citizens of Great Britain. I would not have dared. Because the official OSHA work team, being unaware and the rules otherwise to my substantial performing would have meant several lawsuits had standing of a reputation, not to mention. The outcome of investigation determined that I got together enough like the previous statement. The difficulty that was not talking the in the process. For that all the credit must go to those, leaders of thinking, and history who struggled against all the odds to get us, through the Vietnam war 40 years ago. The late Professor H. A. Hayes I used to think in those days, just too much important, on the national level I find on this that it was to be my. Now OSHA that was there I could make anything, so it is as well that I have, living up my humblest wish, to tell you, and you, of this matter.

The Royal Navy and the spread of Vaccination

R. Wilkinson Jones

ON JENNER OF BERRLEY

The Edward Jenner, whose father the Reverend Henry Jenner was a baronet of the peerage, was born in the small market town of Berrley in Gloucestershire on the 17 May 1753. It was here that he practised as a General Practitioner for much of his life and where he made the observations and wrote the essays which were to make him a central character of medicine.

After an apprenticeship in London under the great surgeon, John Hunter, who subsequently became a life-long friend, Jenner studied some twelve bits of a country doctor but saw very few of the great world and a host of many parts. He was a quiet observant man who did not normally observe more than what the Gilbert Blake, the country parson of Berrleaze in Hampshire, made a habit of important discoveries (the field of natural history). For example, he studied in detail the behaviour of the hedgehog and his paper on the life of the various insects round his domestic cat following up the Royal Society. At the same time, he was, an accomplished musician, poet and diarist.

However it was his observations on the link between cowpox and smallpox, which were begun early in his career that eventually earned him the international reputation.

THE SOURCE OF SMALLPOX

It was Jenner's discovery smallpox was one of the major examples of disease and obtained

more people in the world than any other disease in the nineteenth century.

Half a million men suffered and eight from severe disfigurement, 1 in 6 persons died from smallpox in London in 1779 at least 4000 people died and it was estimated by 1802 that the annual number of deaths from smallpox in the United Kingdom was 45,000.

In the Royal Navy smallpox was extraordinarily less frequent than in civil and military. Lord Cornwallis only 13 cases in India in the years 1758-1760 compared with 1145 cases of smallpox and 2174 cases of fever such as typhus. Nevertheless as evidence of the disease in a ship doctor recommended the ship's company to bring it to shore to port the Gilbert Blake described the disease as, one of the most common diseases to the operations of Africa.

The early treatment for the disease was amputation which was practised on the East India company ships. The technique involved the removal of smallpox staff immediately following only a mild attack. Although it was drastically marked as some cases in the India to prevent the spread of the disease and were only caused extensive deaths.

JENNER'S OBSERVATIONS

Edward Jenner's observations on the relation ship between cowpox and smallpox began in the early part of his career. He noted that the milkmaids and milkmen in his part of the country retained to the resistance to smallpox although they often had sores on their hands which arose from spontaneous eruptions on cow's hands and which were called cowpox. He was struck with the idea that it might be

Professor Wilkinson Jones is a retired naval officer and lives in Farnfield.

possible to postpone the disease by vaccinating men as in the manner of smallpox and that the cow and then from one human being to another. This was tentatively achieved in 1794 when he vaccinated a young boy, and subsequently applied him with smallpox with no ill effects. In the whole series of subsequent experiments on patients contracted the disease. An *Annals* (London) noted: 'what renders vaccine virus an extremely singular is that the person who has been thus affected is for ever after secure from the infection of smallpox.'¹ A Plymouth surgeon and friend of Jenner's called Dawkins, revealed the word vaccination for this procedure.

The problem now arose as to how this discovery could be brought to the attention of the world and to that end Jenner and a small group of friends published in 1798, *An Inquiry into the causes and effects of The Variolae Vaccinae*. Despite opposition and initial reluctance to accept vaccination as such confined to the diseases with which Lazzar's vaccine is mainly associated, the reputation with which the practice of vaccination spread among the world as one of the most remarkable advances in the history of medicine. Within a few years almost every epidemic in Europe was in correspondence with Jenner. Vaccination clinics were set up around the world and vaccine imported from Britain in large quantities to supply the demand.

THE ROLE OF THE NAVY

Vaccination was introduced rapidly, Army and Navy by the name of Dr Jenner. Sir The Duke of York was Commander in Chief of the Army and the Duke of Clarence, Admiral of the Fleet, soon to become one of our major kings, meaning that the efficiency of the service was seriously impaired by the rapid spread of the disease as an example by having their children vaccinated by a Mr Knight, Inspector General of Military Hospitals. A general order was issued to the Army that all children who had not already had smallpox were to be vaccinated. The Admiralty also acted with remarkable speed although it was not in 1800 before a general order for vaccination was issued with it to avoid jumping a vaccinated Fleet doctor Thomas Trotter by command that to that time 'There is scarcely a village that has not long stood as a strong. Finally the Admiralty Board added Article 40 to the Board Instructions to the Navy for 1808 which read:

It is being thought proper that the practice of Vaccine inoculation be extended throughout His Navy: you are to inform all such persons as you may think fit subjects for vaccination, and who are known to have before escaped the Small Pox, to be vaccinated with the vaccine virus, should any person however opposed to vaccination you are with a view to ascertain that procedure to represent the benefits to be derived from the operation, and the subject advantage thereof.

However when the Fleet sailed for the Mediterranean in July 1805 two vaccine doctors were on board with a supply of Jenner's vaccine for the Army and Naval personnel serving in the Mediterranean. One was a Dr J. B. Marshall of Birmingham, Chirodentist, a friend of Jenner's who had supplied vaccine to surgeons for Jenner's. Explaining paper to be medical professions on the efficacy of vaccination. The other was Dr John Walker another leading friend among schoolmasters. The two doctors, as well as which Dr Walker left the Mediterranean as the first part of July. They had already started vaccinating the ships' companies and quickly set to work on the soldiers, sailors and marines on the Fleet where the Commandant in Chief, Admiral Keith, issued a Fleet Order in October 1805 that 'any sailors children or marines who have not had the smallpox need with to mind that dreadful mortality may be apprehended as Dr Marshall on board the Fleet ship, he vaccinated with vaccine, which will not give us sleep or having any work efficiently without all possibility of the patients ever being affected with smallpox.

From Gibraltar the vaccination sailed to Morocco on HMS *PLACENTINE* and then on to Malta where supplies had already been sent out to the Fleet keeping them very busy. In due course they travelled to Italy and finally where the 'Inquiry' had already been translated into Italian and had been for vaccination against Naples and Palermo. In Sicily it is recorded that the children were vaccinated up by the French and led in procession to be vaccinated with gratitude as it was seen from Marseilles through the city by one hunter and portrayed by a artist' as Dr Marshall wrote to Jenner.

In Egypt Dr Walker was invited from his ship as Admiral becoming involved in the battle and losing himself completely in charge of the whole brigade, was compelled to turn from vaccination to general surgery. Finally Walker returned

BOOK REVIEWS

A Handbook for Medical Teachers—Second Edition
David Novack and Robert Gosselin. Pp 117. \$22.95.
Penguin Ltd, London. 1982. 241 pp.

This little book is written in a jargon-free, practical style for those of the medical profession who find their subject somewhat of a nuisance.

Robert Gosselin is an experienced general practitioner and David Novack is an experienced medical teacher. They write in a non-judicial, no-nonsense style that is highly regarded in the field of medicine.

The book covers all aspects of teaching, preparing and giving lectures, writing to teach, group teaching, group and tutorial teaching, practical skills teaching, means of assessing students, class planning and the presentation of teaching aids and materials.

The layout is clear with useful charts and tables. The discussion of the non-accidental death syndrome is a welcome addition.

For those who wish to study further there is a reading guide to the medical texts chapters and a series of references.

The sequence of chapters is not the most logical for those who wish to read the book cover to cover, but for those who wish to dip into it to refresh or to read in a specific area they will find that the order does not pose a problem.

As the medical teacher's needs are so varied, it is good to have a book like this. For those who wish to understand the learning process and to develop their teaching skills, whether the type or extent of teaching is limited.

The book is a Handbook for Medical Teachers. This should be taken as the authors' reason for it is slightly too early for discussion for all those involved in the medical profession.

BRND

Diagnostic Nursing Medicine—Sixth Edition J. J. Sheehan. Pp 267. H. K. Lewis & Co Ltd 97. £11.00.

This little book is required as the Final PRCN medicine course for the majority of nursing and health studies are provided on the steps of this constantly updated and expanded, and also, revised text. As the General Nursing and Health Studies course is now the subject of the University of London, the book is a very useful reference for the majority of nursing students and for the majority of the medical profession.

Diagnostic Nursing Medicine is a book that is written by a group of authors who are all experienced in the field of medicine and who are all experienced in the field of medicine. The book is written in a clear, concise style and is a very useful reference for the majority of the medical profession.

For those who are interested in the medical profession, the book is a very useful reference. The book is written in a clear, concise style and is a very useful reference for the majority of the medical profession.

There is an appendix on learning resources, which is a very useful reference. The book is written in a clear, concise style and is a very useful reference for the majority of the medical profession.

PCB

Writing with AIDS and HIV David Miller. Pp 176. Heinemann 1982. £10.95 (hardback). £7.50.

This volume has received another accolade as the book on the subject of AIDS and HIV. The book is written in a clear, concise style and is a very useful reference for the majority of the medical profession.

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1/8/83

ABSTRACTS

54th Tri-Services Surgical Meeting

The following abstracts were submitted from the Royal Naval Medical Service and the Tri-Services Surgical meeting held 4-11 June 1987

On-line monitoring of the enteric nervous system

D. L. Sinden FRCS
Surgical Commander J. G. Williams FRCS RM

Royal Naval Hospital, Haslem, Gosport

The study aims to assess the usefulness of $^{51}\text{Cr}/\text{EDTA}$ in measuring the neurophysiological function of the gut using a portable gamma probe with 24 h recording. Subjected patients ($n=10$) were given $^{51}\text{Cr}/\text{EDTA}$ and $^{51}\text{Cr}/\text{EDTA}$ is gamma probe was inserted into Malpighi's point. Counts were recorded every 15 s for 24 h on 4 days Monday-14. Results were analysed by computer. Values were stable at 0.0048 ± 0.0014 counts per minute in patients 1-4 and 0.0040 ± 0.0005 counts per minute in patients 5-6 followed by further values 0.0045 ± 0.0004 counts per minute. Values were stable throughout the study. Frequency of a lower amplitude in the left half of the patient (the control) occurred and localized on days three suggesting that the transverse colon may be involved in the process due to the other half there were continuous large fluctuations in counts throughout despite the lying supine. In conclusion a small dose of $^{51}\text{Cr}/\text{EDTA}$ can provide a way of measuring the neurophysiological function. A further finding is that the transverse is involved during sleep in some subjects while in others it does not. One may speculate that these patients in whom there is no typical spreading of the peristalsis during sleep may be more prone to developing colitis.

Cholelithiasis being noted on 24-hr after (MTEB)

Surgical Commander D. A. LaForte FRCS RM
C. Hollister FRCS
W. B. Murray FRCS

University Department of Surgery, Western Infirmary Glasgow

The management of cholelithiasis has been significantly altered by the advent of endoscopic

sphincteromy. However, extraction of stones through the sphincter seems to increase the risk of stone loss into a secondary infection (SBI) and to affect endoscopically stone clearing rates in the future. The technique for endoscopic access to gallstone disease and to present the preliminary experience using MTEB.

Two patients 17 male, 3 female aged range 43-62 years with suspected cholelithiasis were referred. 1 having previously undergone cholecystectomy. Endoscopic cholangiography confirmed and split (2-1) large stones (stones 11 mm-27.5 mm) and post sphincterotomy in both cholecystectomy cases. The MTEB was placed in the bile duct post 14 hours later. MTEB insertion was accompanied by 2 mild to moderate cramp 30 minutes after a 2 hour period. A total of 2.4 dissolution sessions per patient were employed.

Endoscopic radiological assessments revealed complete fragmentation of stones in 4 patients, significant reduction in size in 2 patients and no response in 2. Complications noted were minor duodenal ulcers (1 patient) and transient nausea (3 patients). Minor stone migration to large intestine was occurred in 5 patients and occurred in several cases.

MTEB is an effective dissolution agent for non-calcified cholesterol gallstones. This technique, which appears to have a low morbidity rate 50% of cases of the dissolution of patients with large very hard stones who are complicated with the biliary tract.

Resection of anal canal

Surgical Commander S. B. Marshall FRCS RM
Surgical Commander J. G. Neal FRCS RM

Royal Naval Hospital, Plymouth

A. Johnson & Williams aged 77 was admitted to hospital as an emergency following falls and anal bleeding. Subsequent investigations revealed a bleeding vascular neovascular of the recto sigmoid junction. His pre-operative haemoglobin was 6.4 g/dl. His endorectal anastomosis procedure with a special system for his

SERVICE NEWS

RN MEDICAL AND DENTAL OFFICERS

HONOURS AND AWARDS
QUEEN'S BIRTHDAY honours
Officer of the Order of the British Empire
 Surgeon-Commander R. J. Gosselin

PROMOTIONS

To Surgeon Lieutenant-Commander
 R. F. Boyd R.F.L. Turner

To Surgeon Lieutenant-Commander (ES)
 A. H. C. Maxwell F.N. A. Pomeroy

To Surgeon Lieutenant
 R. P. Adlam M.B.B.S. Glasgow, M.B. Chiro.
 M.A. St Andrews, M.Sc. Stirling, D. Pathology
 J.R. Robinson S.J. Robinson S.V. Bedford

To Acting Surgeon Lieutenant
 S. C. Gray F.R.C.S. (Gen.), M.B. Chiro.
 S. J. Gray J.R. Hadden F.R.C.S. (Ed.),
 J. G. Pittman R.M. Pinner, M.B. Stirling
 M.D. Stirling, D.J. Stirling, F. Wylie
 Forfeited his Reliance for Promotion in date
 11 December 1981

To Surgeon Captain
 D. C. Wiles

To Surgeon-Captain
 D. G. Ryan J.M. Goff J.T.C. Hall,
 C. D. Johnston M.D. Stirling

To Surgeon-Commander (ES)
 D. L. A. Macdonald

CONSULTANTS, SENIOR SPECIALISTS AND SPECIALISTS

The following professional appointments are announced

Consultants

General Surgery
 Surgeon-Commander A. E. Maguire
 Surgeon-Commander P. C. Macdonald

Senior Specialists

Physicians

Surgeon-Commander D. K. Price
On Appointment

Surgeon Lieutenant-Commander M. T. H. Kingle
Qualification expired
 Surgeon Lieutenant-Commander S. P. E. Macdonald

Specialists

Surgeon
 Surgeon-Commander J. E. Campbell
 Surgeon Lieutenant-Commander D. M. Tolson
On Appointment
 Surgeon Lieutenant-Commander D. E. Sherrin
 Surgeon Lieutenant-Commander C. B. Pugh
General Medicine
 Surgeon Lieutenant-Commander R. H. Taylor

SENIOR QUALIFYING OFFICERS

Surgeon-Commander (J. J. Baker—ES)
 Surgeon Lieutenant-Commander (J. A. Gray—
 ES) (ES)
 Surgeon Lieutenant (P. B. Wilson—ES) (ES)
 Surgeon Lieutenant (A. P. L. Gordon—ES) (ES)
 Post B
 Surgeon Lieutenant (M. D. Scott—ES) (ES)
 Surgeon Lieutenant (J. P. L. Turner—ES) (ES)

NEW ENTRIES

Surgeon Lieutenant P. B. Tait
 Surgeon Lieutenant (ES) J. A. Gray
 C. M. Hinch M.B. Chiro. Stirling
 Surgeon Sub-Lieutenant P. McQuay
 J. B. Clark F.R.C.S. (Ed.), D.M. Stirling
 S. C. Hinch, S. E. Hinch, C. A. Price
 J. G. Gray, M. C. D. Tait

TRANSFERS TO FULL CAREER COMMISSION

Surgeon-Commander R. E. Adams C. J. Chamberlain
Surgeon
 C. J. Adams (S. S. Price) D. J. Bland M.B.
 Surgeon Lieutenant-Commander (P. G. Barker—
 A. B. G. Miller F.R.C.S. Stirling)
 Surgeon Lieutenant (S. M. Hinch) D. E. Adams
 S. L. Hinch, A. S. Hinch, A. W. Hinch
 J. J. Hinch

PLACED ON RESERVE LIST

Surgeon Lieutenant-Commander (S. C. Adams)
 Surgeon Lieutenant-Commander (P. J. Hinch)
 Surgeon Lieutenant (S. B. Hall)
 Surgeon Lieutenant (S. M. Hinch)
 Surgeon Lieutenant (S. M. Hinch)
 Surgeon Lieutenant (S. M. Hinch)
 Surgeon Lieutenant (S. M. Hinch)
 Surgeon Lieutenant (S. M. Hinch)
 Surgeon Lieutenant (S. M. Hinch)

RETIREMENTS

Surgeon Captain (ES) A. Moore

ROYAL NAVAL MEDICAL STAFF SCHOOL PRESENTING 1947



Men-at-Arms and prize-winners of the swimming held at Royal Navy Hospital Hotel

The Royal Naval Medical Staff School prize giving was held in the final hall on 21 July last. The guest of honour was Principal Nursing Officer R. M. Mackenzie OBE CBE MC, Member-in-Chief QAR 5495, Director of Naval Nursing Services. The audience, comprising of prize-winners, visitors and family guests together with members of the school staff, were welcomed by Surgeon Captain J. H. S. H. Murray Royal Navy Division of Naval Medical Staff Training.

The school's progress for 1946 had been pronounced due to the universality of the date of the school move, and therefore there was 'no year's' worth of credits to be made. The prize list was made to members of the QAR 5495 and Medical Branch as follows:

QUALIFYING SPECIMENS OF the 14 Hospital Nurses (Dress) eligible to receive citations and badges, 11 awarded and 3 of the 20 Registered General Nurses were also presented with their citations and badges. There was the first purchase of the newly designed certificates and badge, depicting the combined Portsmouth Central and Royal Naval School of Nursing and presented.

The Approved Officers and Nurse Prizes for the best student nurse, comprising their training, receiving an overall assessment of ability, attitude and character was presented to:

ALAN C. B. Bailey — 1946
ALAN T. B. B. Marks — 1947

The Class Prize for the best pupils in each class covering academic and practical ability and an overall assessment of attitude and professional conduct was awarded to:

Med C R. Hilditch —Group B
 GEMMA A. D. Williams—Group B

Medical Branch students. The basic training of Medical Assistants at the Royal Navy School, awarded in February 1963 and the class prize awarded to the individuals who attained the highest academic results throughout Part I and II training was awarded to:

MA. D. C. Jones —Dental Class
 MA. I. Hutton —Liaison Class
 MA. J. P. Thomas—Liaison Class
 MA. C. Hunt —Dental Class

Leading medical assistant professional qualifying course. The class prize for Medical Assistants attending the LMA/PQC were awarded to:

MA. A. C. Brown Course 1/65
 MA. J. Agnew Course 1/65
 MA. D. B. Buchanan Course 1/66
 MA. C. C. Jagrell Course 1/66
 MA. A. Buchanan Course 3/66
 MA. J. C. Russell Course 1/67

Medical branch course entry qualifying course. The class prize for Medical Assistants and Q&R/NVS Leads in Hands and Feet Officers attending the MRSAPQC were awarded to:

MRSAPQ: S. H. Bennett Course 2/65
 MRSAPQ: A. W. Lane Course 1/66
 MRSAPQ: S. Wynn Course 1/66
 LMA: T. P. Roder Course 2/66
 LMA: G. Langille Course 2/66
 PQR/N: J. G. Leggo Course 4/66
 LMA: T. S. Evans Course 1/67

The Peters prize was accompanied by a job for 1963/1964. His wife was an RNLI lifeguard, the increased care and he was so impressed with the quality of her work that he had given orders that he directed in person the award. It is presented to the best professional nurse in the first year of training and was awarded to:

SN M. H. Williams

The Agas Bay prize has been donated by Surgeon Commander R. T. Jolly CBE RN who was Officer Commanding the Agas Bay Field Hospital during Operation Corporate. MA's who successfully complete the LMA/PQC are eligible for this instant award and it is presented to the ones assessed as displaying the qualities of determination, hardy and sense of humour qualities which were key characteristics of Agas Bay medical assistance. The prize was awarded to:

MA. D. M. Buchanan 1966
 MA. A. B. Fox 1967

For many of the personnel who due to Service commitments were unable to attend on the 23 July, a limited ceremony was performed at RNPS Plymouth the following week. The guest of honour was Commander M. J. C. Kynsland A/D, Commander HMS Orkney, Director of Naval Medical Staff Training and Head of Fleet College supervised the Royal Naval Medical Staff School in the ceremony.

AUTHOR INDEX

A. HALL, OFFICE, <i>Emergency—a personal account</i>	113
ANDERSON T B, <i>Three case histories</i>	108
COUTER, E C, <i>Radio hearing loss due to conductive pathology: results and relationship to other acoustic neuropathic cases</i>	101
DEWAR, E P, <i>Vignettes collected in the oral screening rooms of the service</i>	25
DEWIS M F, <i>Vignettes collected in the oral screening rooms of the service</i>	25
ELIAS, P, <i>An unusual outbreak of UMNDS</i>	21
FRANKLIN M C, <i>Radio hearing loss due to conductive pathology: results and relationship to the acoustic neuropathic cases</i>	101
FRANIS T F B, <i>An exchange representative in the USA, a case study review</i>	171
GASTON S J M, <i>Radio hearing loss due to conductive pathology: results and relationship to the acoustic neuropathic cases</i>	101
GORD D P, <i>Acoustically evoked fields</i>	88
HEBET A P, <i>Speed-Cord decompression syndrome: a case history</i>	105
HOOD J H C, <i>Intermittent Rubelling: Part 1 Dependent procedures</i>	9
HOOD J H C, <i>Intermittent Rubelling: Part II Vascular procedures</i>	16
HOOD J H C, <i>Intermittent Rubelling: Part III Vascular Procedures and other techniques</i>	111
JEFFERY M J, <i>Comparative analysis—a case report</i>	115
JEFFERY M N, <i>Comparative analysis—a case report</i>	115
JENSEN S L, <i>Tinnitus: Treatment—a 15 year study</i>	17
JENSEN S L, <i>Mechanism of tinnitus</i>	55
JOHNSON G, <i>Vignettes collected in the oral screening rooms of the service</i>	26
JOHNSON E P, <i>Computer: Application of a Main Computer to a Royal Naval Air Station</i>	149
JONES D M, <i>Speed-Cord decompression syndrome: a case history</i>	105
KLEINMAN C B, <i>Craniohypophyseal dysplasia</i>	31
LITCHFIELD P, <i>Maximal Participation in the Cold—a series of cases of the medical Service</i>	172
LLOYD D V, <i>RMS Business practice experience and the 10 April 1985</i>	79
MARRS M J, <i>A Strategy in Action</i>	58
MCKENZIEN J B, <i>Chromosomal oval dysplasia</i>	48

MILNE TH A F R. <i>Notes on the design of a simple and portable method of determining P.R. interdigital point</i>	111
MILNE TH R B. <i>Speed Card design for navigation</i> (see: Index)	108
OSKLEY E H. <i>The first American warship built: The first Navy's Equilibrium to British Policy</i>	27
OSKLEY E P. <i>Medical Review in Egypt</i>	157
OSKLEY E A H. <i>The British Procedure for inter-feral stability of the foot</i>	34
OSKLEY E A H. <i>Combined P.R. Apparatus and British Procedure for measuring inter-feral and inter-feral stability of the foot</i>	33
PALL E W F. <i>The Institute of Naval Medicine</i>	119
QUINCE A. <i>A review of the treatment and management of venous veins in the Royal Naval Hospital Plymouth 1911-1912</i>	185
RALPH E W. <i>Management—principles and technique</i>	143
REIDELL E G. <i>Drug Treatment for inter-feral injuries</i>	35
ROWE A. <i>Life on a Fighting Machine</i>	5
ROWE AND F H. <i>A Review of the treatment and management of venous veins in the Royal Naval Hospital Plymouth 1911-1912</i>	186
SHAW E C. <i>Comparative Application of a Simple Computer to a Royal Naval Air Service</i>	145
SMITH E G. <i>Descent and Refugee Procedure: Questions for the Armed Forces Medical Officer</i>	179
WALKER A J. <i>The British Procedure—A 15 (1911) study</i>	17
WALKER A J. <i>The British Procedure for inter-feral stability of the foot</i>	34
WALKER A J. <i>Combined P.R. Apparatus and British Procedure for measuring inter-feral and inter-feral stability of the foot</i>	33
WILLIAMS R. <i>Vagueness defined by the total working system of the electrical</i>	25
WILLIAMS R. <i>The Royal Navy and the spread of Venous disease</i>	208
WILLIAMS L F. <i>Experiments: Clinical Research</i>	128

TITLE INDEX

<i>Abstracts</i>	1034
<i>Africa, A. Rejoins de</i>	34
<i>Automated scheduling of the line: The Elving Technology Co.</i>	31
<i>Automated and computer-aided scheduling of the line: (continued) (b) Spectrum (a) Three Proceedings for scheduling</i>	33
<i>Banks, Norman</i>	1034 1035
<i>Berkman, Muel: The first American master at sea: The large services long about it</i>	43
<i>Cable, a Review of some of the critical factors, Mutual performance is the</i>	115
<i>Cable suggests: Gray treatment for food</i>	35
<i>Cable water applications of a Micro Computer in a Royal Naval Air Station</i>	149
<i>Computational control—a data report</i>	115
<i>Craniofacial dysplasia</i>	84
<i>Exposure</i>	1 74 143
<i>Exposure analysis in LORAN: (a)</i>	50
<i>Exposure in Naval Medical</i>	145
<i>Exposure opportunities in the USA: a conference review: (a)</i>	109
<i>Exposure: "United for Peace"</i>	174
<i>Explosion and fire—2 April 1981: HMS Maritime</i>	77
<i>Factor: Physically complex</i>	140
<i>Flaring line data in industrial polymers: Breaks and solutions of the newly-developed parts: Suffolk</i>	111
<i>Forecasting: a personal message</i>	140
<i>Forecasting of Naval Medical: (a)</i>	119
<i>International Marketing</i>	1 15 150
<i>Letters on the Editor</i>	14 128
<i>Manufacturing—development of industrial</i>	140
<i>Medical facilities for the Service: Medical and Dental officers</i>	147
<i>Ministry of medicine</i>	33
<i>Obituary</i>	41 157 211
<i>Psychology: Guidelines for the United States Medical Officer: Director and Staff</i>	109

Royal Naval Medical Club Dinner 1988	52
Service Navy	57, 100, 116
Service Physicists: The Association of	14
Special Civil Responsibilities within a Ship's crew	105
Telexcode system—p 12 and index	17
Three and five ring type	108
Signatory combined in the seal covering matters of the command	26
Navigation: The Royal Navy and the spread of	204
Naval stores in the Royal Naval Hospital Plymouth (1811-1812), various original documents and manuscript of	145
New design Machines: List on	5

ARE YOU CORRECTLY ADDRESSED?

The completed collection of publications in this list sent to the Royal Naval Medical Services are currently being processed from a data entry system in Birmingham, which, it is hoped, will be more in tune with the Royal Naval Medical Services. It is for this reason that the Royal Naval Medical Services are now able to provide a service to complete the list of the Royal Naval Medical Services. The form may also be used to notify future changes of address.

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